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As filed with the Securities and Exchange Commission on July 10, 2018

Registration No. 333-225846

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

AMENDMENT NO. 2 TO

FORM S-1

REGISTRATION STATEMENT
Under
The Securities Act of 1933

Replimune Group, Inc.

(Exact name of Registrant as specified in its charter)

Delaware	**2836**	**82-2082553**
(State or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

Replimune Group, Inc.
18 Commerce Way, Woburn, MA 01801
(781) 995-2443
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Philip Astley-Sparke, Executive Chairman
Replimune Group, Inc.
18 Commerce Way, Woburn, MA 01801
(781) 995-2443
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Please send copies of all communications to:

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Johnny G. Skumpija
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Worldwide Plaza
825 Eighth Avenue
New York, NY 10019
(212) 474-1000

Approximate date of commencement of the proposed sale to the public:
As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act, check the following box. o

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer o	Accelerated filer o	Non-accelerated filer ☒ (Do not check if a smaller reporting company)	Smaller reporting company o Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided to Section 7(a)(2)(B) of the Securities Act. ☒

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	**Amount to be registered[1][2]**	**Proposed maximum offering price per share**	**Proposed maximum aggregate offering price[1][2]**	**Amount of registration fee[3]**
Common stock, par value $0.001 per share	7,705,000	$16.00	$123,280,000	$15,349

(1) Includes additional shares of common stock that the underwriters have the option to purchase.

(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(a) under the Securities Act of 1933, as amended.

(3) The registrant previously paid $12,450 of the registration fee in connection with the original filing of this Registration Statement filed on June 22, 2018.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated July 10, 2018

6,700,000 shares

Replimune Group, Inc.

Common stock

$ per share

This is the initial public offering of our common stock. We are selling 6,700,000 shares of our common stock. We currently expect the initial public offering price to be between $14.00 and $16.00 per share of common stock.

Prior to this offering, there has been no public market for our common stock. We have applied to have our common stock listed on the Nasdaq Global Market, or Nasdaq, under the symbol "REPL."

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, and therefore have elected to comply with certain reduced public company reporting requirements for this prospectus and future filings. See "Prospectus summary—Implications of being an emerging growth company."

Investing in our common stock involves risks. See "Risk factors" beginning on page 14.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	Per share	Total
Initial public offering price	$	$
Underwriting discount[(1)]	$	$
Proceeds to Replimune Group, Inc. (before expenses)	$	$

(1) See "Underwriting" for additional information regarding total underwriting compensation.

The underwriters expect to deliver the shares to purchasers on or about , 2018.

We have granted the underwriters an option for a period of 30 days to purchase up to 1,005,000 additional shares of our common stock at the initial public offering price less the underwriting discount.

Several of our existing stockholders (or their affiliates), including stockholders affiliated with certain of our directors, have indicated an interest in purchasing up to an aggregate of approximately $40.0 million in shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters could determine to sell more, fewer or no shares to any of these stockholders and any of these stockholders could determine to purchase more, fewer or no shares in this offering. The underwriters will receive the same underwriting discount on any shares purchased by these stockholders as they will on any other shares sold to the public in this offering.

J.P. Morgan **Leerink Partners** **BMO Capital Markets**

Prospectus dated , 2018

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Unless the context otherwise requires, references in this prospectus to (i) "Replimune," the "Company," "we," "us" and "our" refer to Replimune Group, Inc. and its consolidated subsidiaries and (ii) a year are references to the applicable calendar year and not our fiscal year.

You should rely only on the information contained in this prospectus or contained in any free writing prospectus prepared by or on behalf of us and filed with the Securities and Exchange Commission, or the SEC. Neither we nor the underwriters have authorized anyone to provide you with additional information or information different from that contained in this prospectus or in any free writing prospectus prepared by or on behalf of us and filed with the SEC. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are offering to sell, and seeking offers to buy, our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus or any free writing prospectus is accurate only as of its date, regardless of its time of delivery or of any sale of our common stock. Our business, financial conditions, results of operations and prospects may have changed since that date.

Through and including , 2018 (the 25th day after the date of this prospectus), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

For investors outside the United States: Neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons who come into possession of this prospectus in jurisdictions outside of the United States are required to inform themselves about and to observe any restrictions relating to this offering and the distribution of this prospectus outside of the United States.

Prospectus summary

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should read the entire prospectus carefully, including the sections entitled "Risk factors" and "Management's discussion and analysis of financial condition and results of operations," and our consolidated financial statements and the related notes.

Business overview

We are a clinical-stage biotechnology company committed to applying our leading expertise in the field of oncolytic immunotherapy to transform the lives of cancer patients. We use our proprietary Immulytic platform to design and develop product candidates that are intended to maximally activate the immune system against solid tumors. The foundation of our platform consists of a proprietary, engineered strain of herpes simplex virus 1, or HSV-1, that has been "armed" with a fusogenic therapeutic protein intended to substantially increase anti-tumor activity. Our platform enables us to design multiple product candidates that incorporate various further genes whose expression is intended to augment the inherent properties of HSV-1 to both directly destroy tumor cells and induce an anti-tumor immune response.

We are currently conducting a Phase 1/2 clinical trial with our lead product candidate, RP1, in approximately 150 patients with a range of solid tumors. We have entered into a collaboration with Bristol-Myers Squibb Company, or BMS, under which it has granted us a non-exclusive, royalty-free license to, and is supplying at no cost, its anti-PD-1 therapy, nivolumab, for use in combination with RP1 in this clinical trial. BMS has no further development-related obligations under this collaboration. The first part of this clinical trial is underway in the United Kingdom and we intend to conduct the second part of the clinical trial, which will enroll patients with four solid tumor types, in both the United Kingdom and, pending the opening of an Investigational New Drug Application, or IND, in the United States. We have also entered into a collaboration agreement with Regeneron Pharmaceuticals, Inc., or Regeneron, under which we intend to conduct clinical development of our product candidates in combination with cemiplimab, an anti-PD-1 therapy being developed by Regeneron. For each clinical trial conducted under this collaboration, Regeneron will fund one-half of the clinical trial costs, supply cemiplimab at no cost, and grant us a non-exclusive, royalty-free license to cemiplimab for use in the clinical trial. The first planned clinical trial to be conducted under this collaboration is a randomized, controlled Phase 2 clinical trial of RP1 in combination with cemiplimab, versus cemiplimab alone, in approximately 240 patients with cutaneous squamous cell carcinoma, or CSCC, which we intend to initiate in the first half of 2019. If compelling clinical data are generated demonstrating the benefits of the combined treatment, we believe the data from this trial could support a filing with regulatory authorities for marketing approval. We also intend to initiate a clinical trial with our second product candidate, RP2, in additional tumor types in the first half of 2019.

Oncolytic immunotherapy is an emerging class of cancer treatment that exploits the ability of certain viruses to selectively replicate in and directly kill tumors, as well as induce a potent, patient-specific, anti-tumor immune response. While clinically active alone, oncolytic immunotherapy may have synergy with certain other treatments and, in particular, with immune checkpoint blockade therapies. Immune checkpoint blockade therapies have recently become established for the treatment of cancer, but only for patients with an ongoing anti-tumor immune response, that is, whose tumors are immunologically "hot." Our product candidates are designed to induce a robust immune response against a patient's cancer, including to the neo-antigens that are uniquely present in tumors, with the goal of improving responses in

immunologically "hot" tumors, turning immunologically "cold" tumors "hot," and enabling patients to respond to immune checkpoint blockade therapies to which they otherwise may not respond.

Our approach combines multiple mechanisms of action into single product candidates in a practical, "off-the-shelf" format. We believe that the bundling of multiple approaches for the treatment of cancer into single therapies will simplify the development path of our product candidates, while also improving patient outcomes at a lower cost to the healthcare system than the use of multiple different drugs.

Our management team has worked together for more than ten years and successfully developed the first oncolytic immunotherapy, Imlygic, also known as talimogene laherparepvec, or T-Vec, which was approved by the U.S. Food and Drug Administration, or FDA, for the treatment of advanced melanoma in 2015.

Our product candidate pipeline

We are developing a pipeline of oncolytic immunotherapy product candidates that we believe have the potential to provide meaningful and long-lasting clinical benefits to cancer patients. The following table summarizes our current pipeline and expectations for development timelines:

Product candidate	Indication	Stage of development
RP1	Mixed advanced solid tumors	Phase 1 clinical trial of RP1 alone and in combination with nivolumab ongoing in the UK in approximately 30 patients (part of an approximately 150 patient Phase 1/2 clinical trial, with Phase 2 to initiate in H1 2019)
	Metastatic melanoma	To initiate four Phase 2 cohorts, approximately 30 patients per cohort, of the ongoing Phase 1/2 clinical trial testing RP1 in combination with nivolumab in H1 2019
	Metastatic bladder cancer	
	Microsatellite instability high cancer	
	Non-melanoma skin cancer	
	Cutaneous squamous cell carcinoma	To enter a Phase 2 controlled clinical trial testing RP1 in combination with cemiplimab vs cemiplimab alone in H1 2019, assuming the opening of an IND or foreign equivalent
RP2	Mixed advanced solid tumors	In preclinical development; to enter a Phase 1 clinical trial in H1 2019, assuming the opening of an IND or foreign equivalent
	Triple negative breast cancer(1)	To enter a Phase 2 clinical trial in H2 2019, assuming the opening of an IND or foreign equivalent
RP3	Anti-PD-1/L1 non-responsive tumors	In preclinical development; to enter a Phase 1 clinical trial in H1 2020, assuming the opening of an IND or foreign equivalent

(1) Two additional tumor types to be selected for Phase 2 clinical development, with clinical trials expected to commence in H2 2019, assuming in each case the opening of an IND or foreign equivalent.

We are conducting an ongoing Phase 1/2 clinical trial of RP1 in approximately 150 patients. RP1 is the first product candidate from our Immulytic platform and is armed with two therapeutic genes that are intended to increase the natural ability of HSV-1 to kill tumor cells and induce an anti-tumor immune response. In the first part of the clinical trial, which we are currently conducting in the United Kingdom, we are evaluating safety in approximately 30 patients with a range of solid tumor types both alone and in

combination with nivolumab. No serious adverse events have been reported to date that have been determined to be related to RP1. In the second part of the trial, which we will conduct in both the United Kingdom and, pending the opening of an IND, in the United States, we will test RP1 in combination with nivolumab in four different tumor types in cohorts of approximately 30 patients each. These tumor types are metastatic melanoma, metastatic bladder cancer, microsatellite instability high cancer, and non-melanoma skin cancer. In this part of the study, we intend to continue to evaluate the safety and tolerability of RP1 in combination with nivolumab, assess efficacy endpoints under the clinical trial protocol, and then analyze each cohort's data to determine the indications that merit progressing into further clinical development. In addition, we are preparing to initiate a randomized, controlled Phase 2 clinical trial of RP1 in combination with cemiplimab, versus cemiplimab alone, in approximately 240 patients with CSCC in the first half of 2019. If compelling clinical data are generated demonstrating the benefits of the combined treatment, we believe the data from this trial could support a filing with regulatory authorities for marketing approval.

We are also developing additional product candidates, including RP2 and RP3, built on our Immulytic platform that are additionally engineered to further enhance anti-tumor immune responses and to address additional tumor types. RP2 has been engineered to express an antibody-like molecule that blocks the activity of CTLA-4, a protein that inhibits immune responses to tumors. We are engineering RP3 with the intent not only to block the activity of CTLA-4, but also to further stimulate an anti-tumor immune response through activation of the immune co-stimulatory pathways. We intend to file INDs and foreign equivalents for both RP2 and RP3 and, subject to regulatory approval, expect that RP2 will enter clinical development in the first half of 2019, and that RP3 will enter clinical development in the first half of 2020. As demonstrated by our planned development timelines, we believe that a particular advantage of our Immulytic platform is that it allows us to develop new product candidates that contain additional genes encoding therapeutic proteins rapidly from conception through to the initiation of clinical trials.

We administer our product candidates by direct injection into solid tumors. We believe that direct injection maximizes virus-mediated tumor cell death, provides the most efficient delivery of virus-encoded immune activating proteins into the tumor, and limits the systemic toxicities that could be associated with intravenous administration. Activation of systemic immunity through local administration can lead to systemic clinical benefit through the induction of responses in tumors which have not themselves been injected, which is known as an "abscopal" effect.

While products and product candidates based on the oncolytic immunotherapy approach have shown single-agent activity, we believe our product candidates will demonstrate particular synergy in combination with immune checkpoint blockade therapies, including those that target the programmed cell death protein 1, or PD-1, a tumor cell surface receptor that plays an important role in inhibiting, or shutting down, immune responses, or the receptor or ligand for PD-1, called PD-L1. We are designing our product candidates with additional mechanisms of action as compared to T-Vec, as well as other oncolytic immunotherapies in development, with the goal of maximizing both direct tumor killing and the activation of the patients' immune system against their particular cancer. We believe these additional mechanisms of action of our product candidates will increase tumor susceptibility to immune checkpoint blockade therapies and, in particular, work synergistically with antibodies targeting PD-1 or PD-L1 to enhance response rates across a range of tumor types.

Our founders and core management team, including Robert Coffin, our President and Chief Executive Officer, Philip Astley-Sparke, our Executive Chairman, and Colin Love, our Chief Operating Officer, were the founder and senior management team of BioVex Group, Inc., or BioVex, where they invented and developed T-Vec. BioVex was acquired by Amgen Inc., or Amgen, in 2011. Our Chief Medical Officer, Howard

Kaufman, was the principal investigator for the pivotal clinical trial upon which T-Vec was approved and previously served as President of the Society for the Immunotherapy of Cancer.

We are backed by a group of leading institutional life science investors, including affiliates of Atlas Ventures, Bain Capital Life Sciences, BVF Partners, Cormorant Capital, Forbion Capital Partners, Foresite Capital, Omega Funds and Redmile Group.

Our strategy

Our goal is to create the leading oncolytic immunotherapy company that discovers, develops and commercializes next-generation products with multiple mechanisms of action for the treatment of a broad range of solid tumor types. Key elements of our strategy include the following:

Advance the development of, and seek regulatory approval for, our lead product candidate, RP1. In the first half of 2019, we are planning to commence a randomized, controlled Phase 2 clinical trial of RP1 in combination with cemiplimab, versus cemiplimab alone, in approximately 240 patients with CSCC. In addition, we are currently conducting an approximately 150 patient Phase 1/2 clinical trial of RP1 targeting four different tumor types in the United Kingdom and, pending the opening of an IND, in the United States. We intend to analyze data for each tumor type to determine the indications that merit further clinical development.

Initiate the clinical development of and obtain regulatory approval for RP2, our next product candidate. We plan to initiate a Phase 1/2 clinical trial in the first half of 2019 of RP2 in combination with anti-PD-1 therapy in triple negative breast cancer and two further indications.

Leverage our Immulytic platform to build a portfolio of product candidates that target a range of immune mechanisms and progress these product candidates into the clinic. We plan to utilize our Immulytic platform to develop additional product candidates, including RP3, that express further combinations of proteins aimed at activating multiple immune mechanisms for the treatment of a broad range of solid tumor types. Our current goal in the coming years is to introduce one product candidate into the clinic each year.

Apply our extensive expertise to establish, equip, and operate our own in-house manufacturing facility. We intend to establish, equip, and operate our own manufacturing facility in Framingham, Massachusetts for multi-product current Good Manufacturing Practice, or cGMP, manufacturing. We expect our facility to be ready to produce clinical-grade material during the first half of 2020 and ultimately to be able to support commercial product launch.

Retain significant economic and commercial rights to our product candidates in key geographic areas. We intend to retain rights in the United States for our product candidates and to develop an oncology-focused commercial organization. When economically attractive, we intend to evaluate and enter into development and marketing agreements with pharmaceutical and biotechnology partners for geographic areas in which we are unlikely to pursue development and commercialization on our own.

Risks affecting our business

You should consider carefully the risks described under the "Risk factors" section beginning on page 14 and elsewhere in this prospectus. The risks that could materially and adversely affect our business, financial condition, operating results and prospects include the following:

- Our product candidates are in the early stages of development, are not approved for commercial sale and might never receive regulatory approval or become commercially viable. We have never generated any revenue from product sales and may never be profitable.
- We currently have only one product candidate, RP1, in clinical development. A failure of this product candidate in clinical development would adversely affect our business and may require us to discontinue development of other product candidates based on the same therapeutic approach.
- We will not be able to commercialize our product candidates if our preclinical studies do not produce successful results and/or our clinical trials do not demonstrate the safety and efficacy of our product candidates.
- We anticipate that our product candidates will be used in combination with third-party drugs, some of which are still in development, and we have limited or no control over the supply, regulatory status, or regulatory approval of these drugs.
- Even if our development efforts are successful, we may not obtain regulatory approval for any of our product candidates in the United States or other jurisdictions, which could prevent us from commercializing our product candidates.
- Following submission of our IND for RP1 in February 2018, the FDA informed us that our Phase 1/2 clinical trial of RP1 may not commence at sites in the United States until we submit the results of an additional preclinical toxicology and biodistribution study that the FDA requested at a pre-IND meeting held in October 2017, and the FDA clears us to proceed with the clinical trial. Until such time, the clinical trial is on clinical hold. If we are not able to obtain, or if we experience delays in obtaining, required regulatory approvals from the FDA, we may not be able to commercialize our product candidates in the United States as expected, and our ability to generate revenue may be materially impaired.
- Even if we obtain regulatory approval for our product candidates, any such approval may be subject to limitations, including with respect to the approved indications or patient populations, which could impair our ability to successfully commercialize our product candidates.
- If we are unable to successfully commercialize any product candidate for which we receive regulatory approval, or experience significant delays in doing so, our business will be materially harmed.
- Negative developments in the field of immuno-oncology could damage public perception of RP1 or any of our other product candidates and negatively affect our business.
- We face significant competition from other biopharmaceutical and biotechnology companies, academic institutions, government agencies, and other research organizations, which may result in others discovering, developing or commercializing products more quickly or marketing them more successfully than us. If their product candidates are shown to be safer or more effective than ours, our commercial opportunity could be reduced or eliminated.

- We are a clinical-stage biopharmaceutical company with a very limited operating history. We have incurred net losses since our inception and anticipate that we will continue to incur substantial and increasing net losses in the foreseeable future. We may never achieve or sustain profitability.
- We will require substantial additional financing to achieve our goals, and a failure to obtain this necessary capital when needed on acceptable terms, or at all, could force us to delay, limit, reduce or terminate our product development or commercialization efforts.
- If we are unable to obtain, maintain and protect our intellectual property rights for our technology and product candidates, or if our intellectual property rights are inadequate, our competitive position could be harmed.
- We have agreements with BMS and Regeneron, and in the future may have agreements with other companies, to obtain the supply of anti-PD-1 therapies for the development of RP1 and our other product candidates. If our relationships with BMS, Regeneron or any future collaborator or supplier are not successful, we may be delayed in completing the development of RP1 and our other product candidates.
- We rely, and expect to continue to rely, on third parties to conduct, supervise, and monitor our preclinical studies and clinical trials, and if those third parties do not perform satisfactorily, including failing to meet deadlines for the completion of such trials or failing to comply with regulatory requirements, we may be unable to obtain regulatory approval for our product candidates or any product candidates that we may develop in the future.
- We face potential product liability exposure, and if successful claims are brought against us, we may incur substantial liability and have to limit the commercialization of any approved products and/or our product candidates.
- We are highly dependent on our key personnel, including our founders, Robert Coffin, Ph.D., our President and Chief Executive Officer, Philip Astley-Sparke, our Executive Chairman, Howard Kaufman, M.D., our Chief Medical Officer, and Colin Love, Ph.D., our Chief Operating Officer. If we are not successful in attracting, motivating and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.
- We have identified material weaknesses in our internal control over financial reporting. If we are unable to remediate these material weaknesses, or if we identify additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls, we may not be able to accurately or timely report our financial condition or results of operations, which may adversely affect our business.

Company and other information

The parent company of our group is Replimune Group, Inc., a Delaware corporation that was formed in July 2017. Prior to the corporate reorganization described below, the parent company of our group was Replimune Limited, a private company limited by shares incorporated in England and Wales (registered number 09496393), which was organized in March 2015.

In July 2017, all of the outstanding equity securities of Replimune Limited were exchanged for equity securities of Replimune Group, Inc., a newly formed Delaware corporation. Following the reorganization, Replimune Limited is a wholly owned subsidiary of Replimune Group, Inc. See "Management's discussion and analysis of financial condition and results of operations—Overview" for more information.

Our principal executive office is located at 18 Commerce Way, Woburn, MA 01801 and our telephone number is (781) 995-2443. Our website address is https://www.replimune.com. We do not incorporate the information on or accessible through our website into this prospectus and you should not consider any information on, or that can be accessed through, our website as part of this prospectus. Our fiscal year end is March 31.

We own various United Kingdom registered trademarks and United States federal trademark applications and unregistered trademarks, including our company name and the "Immulytic" platform name. All other trademarks, service marks and trade names used in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the symbols ® and ™, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

Implications of being an emerging growth company

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of this offering, (b) in which we have total annual gross revenue of at least $1.07 billion, or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period. We refer to the Jumpstart Our Business Startups Act of 2012 in this prospectus as the "JOBS Act," and references in this prospectus to "emerging growth company" have the meaning ascribed to it in the JOBS Act.

An emerging growth company may take advantage of specified reduced reporting requirements and other burdens that are otherwise applicable generally to public companies. These provisions include, but are not limited to:

- being permitted to present only two years of audited financial statements and only two years of related Management's discussion and analysis of financial condition and results of operations in this prospectus;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, or Sarbanes-Oxley Act;
- an exemption from compliance with any new requirements adopted by the Public Company Accounting Oversight Board requiring mandatory audit firm rotations;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirement to hold a nonbinding advisory vote on executive compensation and to obtain stockholder approval of any golden parachute payments not previously approved.

We may use these provisions until such time as we cease to be an emerging growth company.

We have elected to take advantage of certain of the reduced disclosure obligations in the registration statement of which this prospectus is a part and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we provide to our investors may be different from the information you might receive from other public reporting companies that are not emerging growth companies in which you hold equity interests.

The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards applicable to public companies until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this exemption and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

The offering

Common stock we are offering	6,700,000 shares.
Underwriters' option to purchase additional shares	We have granted the underwriters an option for a period of 30 days to purchase up to 1,005,000 additional shares of our common stock.
Common stock outstanding after giving effect to this offering	30,838,587 shares (31,843,587 shares if the underwriters exercise their option to purchase additional shares in full).
Use of proceeds	We estimate that the net proceeds from the sale of 6,700,000 shares of common stock in this offering will be approximately $90.8 million, or approximately $104.8 million if the underwriters exercise their option to purchase additional shares in full, based on an assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We currently expect to use the net proceeds from this offering, together with our existing cash and cash equivalents and short-term investments, as follows: • approximately $20.0 million to fund the development of RP1 through the completion of the ongoing Phase 1/2 clinical trial in four solid tumor types; • approximately $15.0 million to fund our share of the costs to fully recruit our planned Phase 2 clinical trial with RP1 in CSCC; • approximately $20.0 million to fund the completion of the preclinical development and the initial clinical trials of RP2 in approximately 100 patients; • approximately $10.0 million to fund the completion of preclinical development and a Phase 1 clinical trial of RP3; • approximately $20.0 million to fund capital expenditures associated with establishing and equipping our planned manufacturing facility in Framingham, Massachusetts; and • the remainder for general corporate purposes, including working capital requirements and operating expenses.

Dividend policy	We do not intend to pay dividends for the foreseeable future. Any future determination to pay dividends on our common stock will be at the discretion of our board of directors and will depend upon many factors, including our financial position, results of operations, liquidity and legal requirements. See "Dividend policy."
Risk factors	See "Risk factors" beginning on page 14 and the other information included in this prospectus for a discussion of factors you should carefully consider before deciding to invest in our common stock.
Proposed Nasdaq Symbol	"REPL"

Several of our existing stockholders (or their affiliates), including stockholders affiliated with certain of our directors, have indicated an interest in purchasing up to an aggregate of approximately $40.0 million in shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters could determine to sell more, fewer or no shares to any of these stockholders and any of these stockholders could determine to purchase more, fewer or no shares in this offering. The underwriters will receive the same underwriting discount on any shares purchased by these stockholders as they will on any other shares sold to the public in this offering.

The number of shares of our common stock to be outstanding after this offering is based on 24,138,587 shares of our common stock outstanding as of March 31, 2018, after giving effect to the conversion of all outstanding shares of our preferred stock as of March 31, 2018 into an aggregate of 19,157,360 shares of our common stock upon the completion of this offering, and excludes:

- 2,520,247 shares of our common stock issuable upon the exercise of stock options outstanding as of March 31, 2018 at a weighted average exercise price of $2.72 per share;
- 497,344 shares of our common stock issuable upon the exercise of warrants outstanding as of March 31, 2018, at an exercise price of $1.01 per share;
- 3,486,118 shares of our common stock reserved for future issuance under our 2018 Omnibus Incentive Compensation Plan, or our 2018 Plan, which will become effective upon the effectiveness of the registration statement of which this prospectus is a part;
- 131,850 shares of our common stock reserved for future issuance as of March 31, 2018 under our 2017 Equity Compensation Plan, as amended, or our 2017 Plan, which will become available for issuance under our 2018 Plan upon the effectiveness of our 2018 Plan;
- 348,612 shares of our common stock reserved for future issuance under our Employee Stock Purchase Plan, or our ESPP, which will become effective upon the effectiveness of the registration statement of which this prospectus is a part; and
- 26,258 shares of our common A stock outstanding as of March 31, 2018, all of which will be repurchased by us and canceled immediately prior to the completion of this offering.

Unless otherwise indicated, all information in this prospectus reflects or assumes the following:

- the conversion of all outstanding shares of our preferred stock into 19,157,360 shares of our common stock upon the completion of this offering;
- the repurchase and cancellation of all outstanding shares of our common A stock immediately prior to the completion of this offering;
- a 1-for-9.94688 forward stock split of our common stock effected on July 9, 2018, and corresponding adjustments to (i) the rate at which shares of our preferred stock convert into shares of our common stock, (ii) the exercise price of all outstanding stock options and warrants and (iii) the number of shares of our common stock subject to each outstanding option and warrant;
- no exercise by the underwriters of their option to purchase additional shares of our common stock;
- the filing of our amended and restated certificate of incorporation and adoption of our amended and restated bylaws immediately prior to the completion of this offering; and
- the conversion of all outstanding warrants to purchase shares of series seed convertible preferred stock, or series seed preferred stock, into warrants to purchase 497,344 shares of our common stock upon the completion of this offering.

Summary consolidated financial data

You should read the following summary consolidated financial data together with our consolidated financial statements and the related notes appearing at the end of this prospectus and the "Selected consolidated financial data" and "Management's discussion and analysis of financial condition and results of operations" sections of this prospectus. We have derived the consolidated statement of operations data for the years ended March 31, 2017 and 2018 and the consolidated balance sheet data as of March 31, 2017 and 2018 from our audited consolidated financial statements appearing at the end of this prospectus. Our historical results are not necessarily indicative of results that should be expected in any future period.

	Year ended March 31,	
	2017	2018
	(Amounts in thousands, except share and per share data)	
Consolidated statement of operations data		
Operating expenses:		
Research and development	$ 6,936	$ 13,516
General and administrative	2,711	5,713
Total operating expenses	9,647	19,229
Loss from operations	(9,647)	(19,229)
Other income (expense):		
Research and development incentives	1,442	2,267
Interest income	25	288
Change in fair value of warrant liability	(150)	(972)
Other income (expense), net	626	(2,056)
Total other income (expense), net	1,943	(473)
Net loss	(7,704)	(19,702)
Net loss attributable to common stockholders	$ (7,704)	$ (19,702)
Net loss per share attributable to common stockholders, basic and diluted[(1)]	$ (1.55)	$ (3.96)
Weighted average common shares outstanding, basic and diluted[(1)]	4,973,439	4,978,539
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)[(1)]		$ (0.87)
Pro forma weighted average common shares outstanding, basic and diluted (unaudited)[(1)]		21,506,697

(1) See Note 12 to our consolidated financial statements appearing at the end of this prospectus for further details on the calculation of basic and diluted net loss per share attributable to common stockholders and the calculation of unaudited pro forma basic and diluted net loss per share attributable to common stockholders.

	As of March 31, 2018		
	Actual	Pro forma[2]	Pro forma as adjusted[2][3]
	(Amounts in thousands)		
Consolidated balance sheet data			
Cash and cash equivalents and short-term investments	$ 61,551	$ 61,551	$ 152,316
Working capital[1]	59,539	59,539	150,304
Total assets	65,151	65,151	155,916
Warrant liability	1,642	—	—
Total liabilities	6,858	5,216	5,216
Convertible preferred stock	86,361	—	—
Total stockholders' equity (deficit)	(28,068)	59,935	150,700

(1) We define working capital as current assets less current liabilities.

(2) The pro forma consolidated balance sheet data give effect to (i) the conversion of all outstanding shares of our preferred stock into an aggregate of 19,157,360 shares of common stock upon the completion of this offering, (ii) all outstanding warrants to purchase shares of series seed preferred stock becoming warrants to purchase shares of common stock upon the completion of this offering and (iii) all outstanding shares of our common A stock being repurchased by us and canceled immediately prior to the completion of this offering.

(3) The pro forma as adjusted balance sheet data gives further effect to our issuance and sale of 6,700,000 shares of our common stock in this offering at an assumed initial public offering price of $15.00 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma as adjusted information discussed above is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing. A $1.00 increase (decrease) in the assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) each of cash and cash equivalents and short-term investments, additional paid-in capital, total stockholders' equity (deficit) and total capitalization on a pro forma as adjusted basis by approximately $6.2 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. An increase (decrease) of 1,000,000 shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) each of cash and cash equivalents and short-term investments, additional paid-in capital, total stockholders' equity (deficit) and total capitalization on a pro forma as adjusted basis by approximately $14.0 million, assuming the assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Risk factors

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information in this prospectus, including our consolidated financial statements and related notes appearing at the end of this prospectus, before deciding whether to purchase shares of our common stock. If any of the following risks are realized, our business, financial condition, operating results and prospects could be materially and adversely affected. In that event, the price of our common stock could decline, and you could lose part or all of your investment. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business.

Risks related to product development

Our product candidates are in the early stages of development, are not approved for commercial sale and might never receive regulatory approval or become commercially viable. We have never generated any revenue from product sales and may never be profitable.

All of our product candidates are in research or early development. We have not generated any revenues from the sale of products and do not expect to do so for at least the next several years. Our lead product candidate, RP1, and any other product candidates will require extensive preclinical and/or clinical testing and regulatory approval prior to commercial use. Our research and development efforts may not be successful. Even if our clinical development efforts result in positive data, our product candidates may not receive regulatory approval or be successfully introduced and marketed at prices that would permit us to operate profitably.

We currently have only one product candidate, RP1, in clinical development. A failure of this product candidate in clinical development would adversely affect our business and may require us to discontinue development of other product candidates based on the same therapeutic approach.

RP1 is our only clinical development-stage product candidate. Although we have other product candidates, RP2 and RP3, in preclinical development and we intend to develop additional product candidates in the coming years, it will take additional investment and time for such product candidates to reach the same stage of development as RP1, and there can be no assurance that they will ever do so. Since all of the product candidates in our current pipeline are based on our Immulytic platform, if RP1 fails in development as a result of any underlying problem with our Immulytic platform, then we may be required to discontinue development of all product candidates that are based on our therapeutic approach. If we were required to discontinue development of RP1 or our other product candidates, or if any of them were to fail to receive regulatory approval or achieve sufficient market acceptance, we could be prevented from or significantly delayed in achieving profitability. We can provide no assurance that we would be successful at developing other product candidates based on an alternative therapeutic approach.

We will not be able to commercialize our product candidates if our preclinical studies do not produce successful results and/or our clinical trials do not demonstrate the safety and efficacy of our product candidates.

Our lead product candidate, RP1, is in the early stages of a Phase 1/2 clinical trial in the United Kingdom and, pending the opening of an IND, in the United States, while our other product candidates, RP2 and RP3, are in preclinical development. We expect to file INDs and foreign equivalents for RP2 and RP3 and, subject to regulatory clearance, expect RP2 to begin a Phase 1/2 clinical trial in the first half of 2019 and

expect RP3 to enter clinical development in the first half of 2020. Our product candidates will require preclinical and clinical trials before we can submit a marketing application to the applicable regulatory authorities. Our product candidates are susceptible to the risks of failure inherent at any stage of product development, including the occurrence of unexpected or unacceptable adverse events or the failure to demonstrate efficacy in clinical trials. Clinical development is expensive and can take many years to complete, and its outcome is inherently uncertain.

The results of preclinical studies, preliminary study results, and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. While we are currently conducting an early stage Phase 1/2 clinical trial with RP1, we do not yet have clinical results for any of our product candidates. Our product candidates may not perform as we expect, may ultimately have a different or no impact on tumors, may have a different mechanism of action than we expect in humans, and may not ultimately prove to be safe and effective.

Preliminary and final results from preclinical studies and early stage trials, and trials in compounds that we believe are similar to ours, may not be representative of results that are found in larger, controlled, blinded, and longer-term studies. Product candidates may fail at any stage of preclinical or clinical development. Product candidates may fail to show the desired safety and efficacy traits even if they have progressed through preclinical studies or initial clinical trials. Preclinical studies and clinical trials may also reveal unfavorable product candidate characteristics, including safety concerns. A number of companies in the biopharmaceutical industry have suffered significant setbacks in clinical trials, notwithstanding promising results in earlier preclinical studies or clinical trials or promising mechanisms of action. In some instances, there can be significant variability in safety or efficacy results between different clinical trials of the same product candidate due to numerous factors, including changes in trial procedures set forth in protocols, differences in the size and type of the patient populations, changes in and adherence to the clinical trial protocols and the rate of dropout among clinical trial participants. Moreover, should there be an issue with the design of a clinical trial, our results may be impacted. We may not discover such a flaw until the clinical trial is at an advanced stage.

We may also experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our ability to receive marketing approval or commercialize our product candidates, including:

- regulators or institutional review boards, or IRBs, may not authorize us or our investigators to commence a clinical trial, conduct a clinical trial at a prospective trial site, or amend trial protocols, or may require that we modify or amend our clinical trial protocols;

- we may experience delays in reaching, or fail to reach, agreement on acceptable clinical trial contracts or clinical trial protocols with prospective trial sites and/or clinical research organizations, or CROs;

- clinical trials of our product candidates may produce negative or inconclusive results, or our studies may fail to reach the necessary level of statistical significance, and we may decide, or regulators may require us, to conduct additional clinical trials or abandon product development programs;

- the number of patients required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate or participants may drop out of these clinical trials or be lost to follow-up at a higher rate than we anticipate, or may elect to participate in alternative clinical trials sponsored by our competitors with product candidates that treat the same indications as our product candidates;

- our third-party contractors may fail to comply with regulatory requirements or the clinical trial protocol, or meet their contractual obligations to us in a timely manner, or at all, or we may be required to engage in additional clinical trial site monitoring;
- we, regulators, or IRBs may require that we or our investigators suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements or a finding that the participants are being exposed to unacceptable health risks, undesirable side effects, or other unexpected characteristics of the product candidate, or due to findings of undesirable effects caused by a chemically or mechanistically similar therapeutic or therapeutic candidate;
- changes could be adopted in marketing approval policies during the development period, rendering our data insufficient to obtain marketing approval;
- statutes or regulations could be amended or new ones could be adopted;
- changes could be adopted in the regulatory review process for submitted product applications;
- the cost of clinical trials of our product candidates may be greater than we anticipate or we may have insufficient funds for a clinical trial or to pay the substantial user fees required by the FDA upon the filing of a Biologics License Application, or BLA, or equivalent authorizations from comparable foreign regulatory authorities;
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates may be insufficient or inadequate;
- we may decide, or regulators may require us, to conduct or gather, as applicable, additional clinical trials, analyses, reports, data, or preclinical trials, or we may abandon product development programs;
- we may fail to reach an agreement with regulators or IRBs regarding the scope, design, or implementation of our clinical trials, and the FDA or comparable foreign regulatory authorities may require changes to our study designs that make further study impractical or not financially prudent;
- regulators may ultimately disagree with the design or our conduct of our preclinical studies or clinical trials, finding that they do not support product candidate approval;
- we may have delays in adding new investigators or clinical trial sites, or we may experience a withdrawal of clinical trial sites;
- patients that enroll in our studies may misrepresent their eligibility or may otherwise not comply with the clinical trial protocol, resulting in the need to drop the patients from the study or clinical trial, increase the needed enrollment size for the clinical trial or extend its duration;
- there may be regulatory questions or disagreements regarding interpretations of data and results, or new information may emerge regarding our product candidates;
- the FDA or comparable foreign regulatory authorities may disagree with our study design, including endpoints, or our interpretation of data from preclinical studies and clinical trials or find that a product candidate's benefits do not outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may not accept data from studies with clinical trial sites in foreign countries;
- the FDA or comparable foreign regulatory authorities may disagree with our intended indications;

- the FDA or comparable foreign regulatory authorities may fail to approve or subsequently find fault with the manufacturing processes or our manufacturing facilities for clinical and future commercial supplies;

- the data collected from clinical trials of our product candidates may not be sufficient to the satisfaction of the FDA or comparable foreign regulatory authorities to support the submission of a BLA or other comparable submission in foreign jurisdictions or to obtain regulatory approval in the United States or elsewhere;

- the FDA or comparable foreign regulatory authorities may take longer than we anticipate to make a decision on our product candidates; and

- we may not be able to demonstrate that a product candidate provides an advantage over current standards of care or current or future competitive therapies in development.

Our development costs will also increase if we experience delays in testing or approvals, and we may not have sufficient funding to complete the testing and approval process for any of our product candidates. We may be required to obtain additional funds to complete clinical trials and prepare for possible commercialization of our product candidates. We do not know whether any preclinical tests or clinical trials beyond what we currently have planned will be required, will begin as planned, will need to be restructured, or will be completed on schedule, or at all. Significant delays relating to any preclinical or clinical trials also could shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do and impair our ability to successfully commercialize our product candidates and may harm our business and results of operations. In addition, many of the factors that cause, or lead to, delays in clinical trials may ultimately lead to the denial of marketing approval of any of our product candidates. If any of these occur, our business, financial condition, results of operations, stock price and prospects may be materially harmed.

We anticipate that our product candidates will be used in combination with third-party drugs, some of which are still in development, and we have limited or no control over the supply, regulatory status, or regulatory approval of such drugs.

Our product candidates are intended to be administered in combination with checkpoint blockade drugs, a class of drugs that are intended to stop tumor cells from "switching off" an immune system attack against themselves. We have entered into an agreement with BMS for the supply of nivolumab, its anti-PD-1 therapy, for use in connection with our current Phase 1/2 clinical trial with RP1. We have also entered into a clinical collaboration agreement with Regeneron which includes the supply of cemiplimab, its anti-PD-1 therapy, for clinical trials conducted under the agreement. The first planned clinical trial to be conducted under the agreement is a randomized, controlled Phase 2 clinical trial of RP1 in combination with cemiplimab, compared to cemiplimab alone, in approximately 240 patients with CSCC. We may enter into additional agreements for the supply of anti-PD-1 products for use in connection with the development of one or more of our product candidates. Our ability to develop and ultimately commercialize our product candidates used in combination with nivolumab, cemiplimab or any other checkpoint blockade therapy will depend on our ability to access such drugs on commercially reasonable terms for the clinical trials and their availability for use with the commercialized product, if approved. We cannot be certain that current or potential future commercial relationships will provide us with a steady supply of such drugs on commercially reasonable terms or at all.

Any failure to maintain or enter into new successful commercial relationships, or the expense of purchasing checkpoint blockade therapies in the market, may delay our development timelines, increase

our costs and jeopardize our ability to develop our product candidates as commercially viable therapies. If any of these occur, our business, financial condition, results of operations, stock price and prospects may be materially harmed.

Moreover, the development of product candidates for use in combination with another product or product candidate may present challenges that are not faced for single agent product candidates. We are developing RP1 and our other product candidates for use in combination with anti-PD-1 or anti-PD-L1 therapies and may develop RP1 or our other product candidates for use with other therapies. The FDA may require us to use more complex clinical trial designs in order to evaluate the contribution of each product and product candidate to any observed effects. It is possible that the results of these trials could show that any positive previous trial results are attributable to the combination therapy and not our product candidates. Moreover, following product approval, the FDA may require that products used in conjunction with each other be cross labeled for combined use. To the extent that we do not have rights to the other product, this may require us to work with a third party to satisfy such a requirement. Moreover, developments related to the other product may impact our clinical trials for the combination as well as our commercial prospects should we receive marketing approval. Such developments may include changes to the other product's safety or efficacy profile, changes to the availability of the approved product, and changes to the standard of care.

In the event that BMS, Regeneron or any future collaborator or supplier cannot continue to supply their products on commercially reasonable terms, we would need to identify alternatives for accessing an anti-PD-1 therapy. Additionally, should the supply of products from BMS, Regeneron or any future collaborator or supplier be interrupted, delayed or otherwise be unavailable to us, our clinical trials may be delayed. In the event we are unable to source a supply of an alternative anti-PD-1 therapy, or are unable to do so on commercially reasonable terms, our business, financial condition, results of operations, stock price and prospects may be materially harmed.

If we fail to develop additional product candidates, our commercial opportunity could be limited.

We expect initially to develop our lead product candidate, RP1. A key part of our strategy, however, is to pursue clinical development of additional product candidates, including RP2 and RP3. Developing, obtaining marketing approval for, and commercializing additional product candidates will require substantial additional funding beyond the net proceeds of this offering and will be subject to the risks of failure inherent in medical product development. We cannot assure you that we will be able to successfully advance any of these additional product candidates through the development process.

Even if we obtain approval from the FDA or comparable foreign regulatory authorities to market additional product candidates for the treatment of solid tumors, we cannot assure you that any such product candidates will be successfully commercialized, widely accepted in the marketplace, or more effective than other commercially available alternatives. If we are unable to successfully develop and commercialize additional product candidates our commercial opportunity may be limited and our business, financial condition, results of operations, stock price and prospects may be materially harmed.

Risks related to regulatory approval

Even if our development efforts are successful, we may not obtain regulatory approval for any of our product candidates in the United States or other jurisdictions, which would prevent us from commercializing our product candidates. Even if we obtain regulatory approval for our product candidates, any such approval may be subject to limitations, including with respect to the approved indications or patient populations, which could impair our ability to successfully commercialize our product candidates.

We are not permitted to market or promote or sell any of our product candidates before we receive regulatory approval from the FDA or comparable foreign regulatory authorities, and we may never receive such regulatory approval for any of our product candidates. Securing marketing approval requires the submission of extensive preclinical and clinical data and supporting information to regulatory authorities for each therapeutic indication to establish the product candidate's safety and efficacy for that indication. Securing marketing approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities and clinical trial sites by, the regulatory authorities. If we do not receive approval from the FDA and comparable foreign regulatory authorities for any of our product candidates, we will not be able to commercialize such product candidates in the United States or in other jurisdictions. If significant delays in obtaining approval for and commercializing our product candidates occur in any jurisdictions, our business, financial condition, results of operations, stock price and prospects will be materially harmed. Even if our product candidates are approved, they may:

- be subject to limitations on the indicated uses or patient populations for which they may be marketed, distribution restrictions, or other conditions of approval;
- contain significant safety warnings, including boxed warnings, contraindications, and precautions;
- not be approved with label statements necessary or desirable for successful commercialization; or
- contain requirements for costly post-market testing and surveillance, or other requirements, including the submission of a risk evaluation and mitigation strategy, or REMS, to monitor the safety or efficacy of the products.

We have not previously submitted a BLA to the FDA, or a similar marketing application to comparable foreign regulatory authorities, for any product candidate, and we can provide no assurance that will ultimately be successful in obtaining regulatory approval for claims that are necessary or desirable for successful marketing, or at all.

The regulatory approval processes of the FDA and comparable foreign regulatory authorities are lengthy, time consuming and inherently unpredictable. If we are not able to obtain, or experience delays in obtaining, required regulatory approvals, we will not be able to commercialize our product candidates as expected, and our ability to generate revenue may be materially impaired.

The time required to obtain approval by the FDA and comparable foreign regulatory authorities is unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. For example, the FDA verbally informed us on March 23, 2018 and confirmed in writing on April 18, 2018 that our Phase 1/2 clinical trial of RP1 is on clinical hold and may not commence at U.S. sites until we submit the results of a preclinical toxicology and biodistribution study with a longer follow-up period than

was required by the regulatory authorities in the United Kingdom and the FDA clears us to proceed with the clinical trial. We anticipate that we will be submitting the results from this study to the FDA in the third quarter of 2018. These regulatory requirements may require us to amend our clinical trial protocols, conduct additional preclinical studies or clinical trials that may require regulatory or IRB approval, or otherwise cause delays in the approval or rejection of an application. Any delay in obtaining or failure to obtain required approvals could materially adversely affect our ability to generate revenue from the particular product candidate, which may materially harm our business, financial condition, results of operations, stock price and prospects.

Regulatory authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional preclinical, clinical or other studies. In addition, varying interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent marketing approval of a product candidate. The number and types of preclinical studies and clinical trials that will be required for regulatory approval also varies depending on the product candidate, the disease or condition that the product candidate is designed to address, and the regulations applicable to any particular product candidate. Approval policies, regulations or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions, and there may be varying interpretations of data obtained from preclinical studies or clinical trials, any of which may cause delays or limitations in the approval or a decision not to approve an application. It is possible that our product candidates will never obtain the appropriate regulatory approvals necessary for us to commence product sales.

If we experience delays in obtaining approval, if we fail to obtain approval of a product candidate or if the label for a product candidate does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate, the commercial prospects for such product candidate may be harmed and our ability to generate revenues from that product candidate may be materially impaired.

The FDA or a comparable foreign regulatory authority may determine that our product candidates have undesirable side effects that could delay or prevent their regulatory approval or commercialization.

To date, the most commonly reported adverse events observed for RP1 are local erythematous and inflammatory reactions and systemic fevers and chills. However, there can be no assurance that additional undesirable side effects or serious adverse events will not be caused by or associated with RP1 or our other product candidates as they continue through or enter clinical development. Serious adverse events or undesirable side effects caused by our product candidates could cause us, IRBs, and other reviewing entities or regulatory authorities to interrupt, delay, or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or comparable foreign regulatory authorities. For example, if concerns are raised regarding the safety of a new therapeutic as a result of undesirable side effects identified during clinical or preclinical testing, the FDA or comparable foreign regulatory authority may order us to cease further development, decline to approve product candidate or issue a letter requesting additional data or information prior to making a final decision regarding whether or not to approve the product candidate. The FDA or comparable foreign regulatory authorities, or IRBs and other reviewing entities, may also require, or we may voluntarily develop, strategies for managing adverse events during clinical development, which could include restrictions on our enrollment criteria, the use of stopping criteria, adjustments to a study's design, or the monitoring of safety data by a data monitoring committee, among other strategies. The FDA or a comparable foreign regulatory authority requests for additional data or information could also result in substantial delays in the approval of our product candidates.

Undesirable side effects caused by any of our product candidates could also result in denial of regulatory approval by the FDA or comparable foreign regulatory authorities for any or all targeted indications or the inclusion of unfavorable information in our product labeling, such as limitations on the indicated uses for which the products may be marketed or distributed, a label with significant safety warnings, including boxed warnings, contraindications, and precautions, a label without statements necessary or desirable for successful commercialization, or may result in requirements for costly post-marketing testing and surveillance, or other requirements, including REMS, to monitor the safety or efficacy of the products, and in turn prevent us from commercializing and generating revenues from the sale of our product candidates. Undesirable side effects may limit the potential market for any approved products or could result in the discontinuation of the sales and marketing of the product, or withdrawal of product approvals. Later discovered undesirable side effects may further result in the imposition of a REMS, label revisions, post-approval study requirements, or other testing and surveillance.

If any of our product candidates is associated with serious adverse events or undesirable side effects or have properties that are unexpected, we may need to abandon development or limit development of that product candidate to certain uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective. The therapeutic-related side effects could affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. Any of these occurrences may materially harm our business, financial condition, results of operations, stock price and prospects.

Changes in product candidate manufacturing or formulation may result in additional costs or delay.

As product candidates are developed through preclinical studies to later-stage clinical trials towards approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered along the way in an effort to optimize processes and results. Any of these changes could cause our product candidates to perform differently and affect the results of planned clinical trials or other future clinical trials conducted with the altered materials. Such changes may also require additional testing, or notification to, or approval by the FDA or a comparable foreign regulatory authority. This could delay completion of clinical trials, require the conduct of bridging clinical trials or studies, require the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our product candidates and/or jeopardize our ability to commence product sales and generate revenue.

Regulatory approval by the FDA or comparable foreign regulatory authorities is limited to those specific indications and conditions for which approval has been granted, and we may be subject to substantial fines, criminal penalties, injunctions, or other enforcement actions if we are determined to be promoting the use of our products for unapproved or "off-label" uses, resulting in damage to our reputation and business.

We must comply with requirements concerning advertising and promotion for any product candidates for which we obtain marketing approval. Promotional communications with respect to therapeutics are subject to a variety of legal and regulatory restrictions and continuing review by the FDA, Department of Justice, Department of Health and Human Services' Office of Inspector General, state attorneys general, members of Congress, and the public. When the FDA or comparable foreign regulatory authorities issue regulatory approval for a product candidate, the regulatory approval is limited to those specific uses and indications for which a product is approved. If we are not able to obtain FDA approval for desired uses or indications for our product candidates, we may not market or promote them for those indications and uses, referred to as off-label uses, and our business, financial condition, results of operations, stock price and prospects

will be materially harmed. We also must sufficiently substantiate any claims that we make for our products, including claims comparing our products to other companies' products, and must abide by the FDA's strict requirements regarding the content of promotion and advertising.

While physicians may choose to prescribe products for uses that are not described in the product's labeling and for uses that differ from those tested in clinical trials and approved by the regulatory authorities we are prohibited from marketing and promoting the products for indications and uses that are not specifically approved by the FDA. These off-label uses are common across medical specialties and may constitute an appropriate treatment for some patients in varied circumstances. Regulatory authorities in the United States generally do not restrict or regulate the behavior of physicians in their choice of treatment within the practice of medicine. Regulatory authorities do, however, restrict communications by biopharmaceutical companies concerning off-label use.

If we are found to have impermissibly promoted any of our product candidates, we may become subject to significant liability and government fines. The FDA and other agencies actively enforce the laws and regulations regarding product promotion, particularly those prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted a product may be subject to significant sanctions. The federal government has levied large civil and criminal fines against companies for alleged improper promotion and has enjoined several companies from engaging in off-label promotion. The FDA has also requested that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed.

In the United States, engaging in the impermissible promotion of our products, following approval, for off-label uses can also subject us to false claims and other litigation under federal and state statutes. These include fraud and abuse and consumer protection laws, which can lead to civil and criminal penalties and fines, agreements with governmental authorities that materially restrict the manner in which we promote or distribute therapeutic products and conduct our business. These restrictions could include corporate integrity agreements, suspension or exclusion from participation in federal and state healthcare programs, and suspension and debarment from government contracts and refusal of orders under existing government contracts. These False Claims Act lawsuits against manufacturers of drugs and biologics have increased significantly in volume and breadth, leading to several substantial civil and criminal settlements, up to $3.0 billion, pertaining to certain sales practices and promoting off-label uses. In addition, False Claims Act lawsuits may expose manufacturers to follow-on claims by private payers based on fraudulent marketing practices. This growth in litigation has increased the risk that a biopharmaceutical company will have to defend a false claim action, pay settlement fines or restitution, as well as criminal and civil penalties, agree to comply with burdensome reporting and compliance obligations, and be excluded from Medicare, Medicaid, or other federal and state healthcare programs. If we do not lawfully promote our approved products, if any, we may become subject to such litigation and, if we do not successfully defend against such actions, those actions may have a material adverse effect on our business, financial condition, results of operations, stock price and prospects.

In the United States, the promotion of biopharmaceutical products are subject to additional FDA requirements and restrictions on promotional statements. If after one or more of our product candidates obtains marketing approval the FDA determines that our promotional activities violate its regulations and policies pertaining to product promotion, it could request that we modify our promotional materials or subject us to regulatory or other enforcement actions, including issuance of warning letters or untitled letters, suspension or withdrawal of an approved product from the market, requests for recalls, payment of civil fines, disgorgement of money, imposition of operating restrictions, injunctions or criminal prosecution, and other enforcement actions. Similarly, industry codes in foreign jurisdictions may prohibit companies

from engaging in certain promotional activities and regulatory agencies in various countries may enforce violations of such codes with civil penalties. If we become subject to regulatory and enforcement actions our business, financial condition, results of operations, stock price and prospects will be materially harmed.

Even if our product candidates receive regulatory approval, we will be subject to ongoing obligations and continued regulatory review, which may result in significant additional expense and limit how we manufacture and market our products.

Any product candidate for which we obtain marketing approval will be subject to extensive and ongoing requirements of and review by the FDA and comparable foreign regulatory authorities, including requirements related to the manufacturing processes, post-approval clinical data, labeling, packaging, distribution, adverse event reporting, storage, recordkeeping, export, import, advertising, marketing, and promotional activities for such product. These requirements further include submissions of safety and other post-marketing information, including manufacturing deviations and reports, registration and listing requirements, the payment of annual fees, continued compliance with cGMP requirements relating to manufacturing, quality control, quality assurance, and corresponding maintenance of records and documents, and good clinical practices, or GCPs, for any clinical trials that we conduct post-approval.

The FDA and comparable foreign regulatory authorities will continue to closely monitor the safety profile of any product even after approval. If the FDA or comparable foreign regulatory authorities become aware of new safety information after approval of any of our product candidates, they may withdraw approval, issue public safety alerts, require labeling changes or establishment of a REMS or similar strategy, impose significant restrictions on a product's indicated uses or marketing, or impose ongoing requirements for potentially costly post-approval studies or post-market surveillance. Any such restrictions could limit sales of the product.

We and any of our suppliers or collaborators, including our contract manufacturers, could be subject to periodic unannounced inspections by the FDA to monitor and ensure compliance with cGMPs and other FDA regulatory requirements. Application holders must further notify the FDA, and depending on the nature of the change, obtain FDA pre-approval for product and manufacturing changes.

In addition, later discovery of previously unknown adverse events or that the product is less effective than previously thought or other problems with our products, manufacturers or manufacturing processes, or failure to comply with regulatory requirements both before and after approval, may yield various negative results, including:

- restrictions on manufacturing, distribution, or marketing of such products;
- restrictions on the labeling, including required additional warnings, such as black boxed warnings, contraindications, precautions, and restrictions on the approved indication or use;
- modifications to promotional pieces;
- issuance of corrective information;
- requirements to conduct post-marketing studies or other clinical trials;
- clinical holds or termination of clinical trials;
- requirements to establish or modify a REMS or similar strategy;
- changes to the way the product candidate is administered;
- liability for harm caused to patients or subjects;
- reputational harm;

- the product becoming less competitive;
- warning, untitled, or cyber letters;
- suspension of marketing or withdrawal of the products from the market;
- regulatory authority issuance of safety alerts, Dear Healthcare Provider letters, press releases, or other communications containing warnings or other safety information about the product candidate;
- refusal to approve pending applications or supplements to approved applications that we submit;
- recalls of products;
- fines, restitution or disgorgement of profits or revenues;
- suspension or withdrawal of marketing approvals;
- refusal to permit the import or export of our products;
- product seizure or detention;
- FDA debarment, suspension and debarment from government contracts, and refusal of orders under existing government contracts, exclusion from federal healthcare programs, consent decrees, or corporate integrity agreements; or
- injunctions or the imposition of civil or criminal penalties, including imprisonment.

Any of these events could prevent us from achieving or maintaining market acceptance of the particular product candidate, if approved, or could substantially increase the costs and expenses of commercializing such product, which in turn could delay or prevent us from generating significant revenues from its marketing and sale. Any of these events could further have other material and adverse effects on our operations and business and could adversely impact our business, financial condition, results of operations, stock price and prospects.

The FDA's policies or those of comparable foreign regulatory authorities may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates, limit the marketability of our product candidates, or impose additional regulatory obligations on us. Changes in medical practice and standard of care may also impact the marketability of our product candidates.

If we are slow or unable to adapt to changes in existing requirements, standards of care, or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and be subject to regulatory enforcement action.

Should any of the above actions take place, we could be prevented from or significantly delayed in achieving profitability. Further, the cost of compliance with post-approval regulations may have a negative effect on our operations and business and could adversely impact our business, financial condition, results of operations, stock price and prospects.

Obtaining and maintaining marketing approval for our product candidates in one jurisdiction would not mean that we will be successful in obtaining marketing approval of that product candidate in other jurisdictions, which could prevent us from marketing our products internationally.

Obtaining and maintaining marketing approval of our product candidates in one jurisdiction would not guarantee that we will be able to obtain or maintain marketing approval in any other jurisdiction, while a failure or delay in obtaining marketing approval in one jurisdiction may have a negative effect on the marketing approval process in others. For example, even if the FDA grants marketing approval of a product candidate, comparable foreign regulatory authorities must also approve the manufacturing, marketing and promotion of the product candidate in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the United States, including additional preclinical studies or clinical trials, as clinical trials conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In many jurisdictions outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we intend to charge for our products is also subject to approval.

Regulatory authorities in jurisdictions outside of the United States have requirements for approval of product candidates with which we must comply prior to marketing in those jurisdictions. Obtaining foreign marketing approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. If we fail to comply with the regulatory requirements in international markets and/or receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of RP1 and our other product candidates will be harmed. If we obtain approval for any product candidate and ultimately commercialize that product in foreign markets, we would be subject to additional risks and uncertainties, including the burden of complying with complex and changing foreign regulatory, tax, accounting and legal requirements and the reduced protection of intellectual property rights in some foreign countries.

Risks related to commercialization

If we are unable to successfully commercialize any product candidate for which we receive regulatory approval, or experience significant delays in doing so, our business will be materially harmed.

If we are successful in obtaining marketing approval from applicable regulatory authorities for RP1 or any of our other product candidates, our ability to generate revenues from our product candidates will depend on our success in:

- launching commercial sales of our product candidates, whether alone or in collaboration with others;
- receiving an approved label with claims that are necessary or desirable for successful marketing, and that does not contain safety or other limitations that would impede our ability to market the product candidates;
- creating market demand for our product candidates through marketing, sales and promotion activities;
- hiring, training, and deploying a sales force or contracting with third parties to commercialize product candidates in the United States;
- manufacturing product candidates in sufficient quantities and at acceptable quality and cost to meet commercial demand at launch and thereafter;

- establishing and maintaining agreements with wholesalers, distributors, and group purchasing organizations on commercially reasonable terms;
- creating partnerships with, or offering licenses to, third parties to promote and sell product candidates in foreign markets where we receive marketing approval;
- maintaining patent and trade secret protection and regulatory exclusivity for our product candidates;
- achieving market acceptance of our product candidates by patients, the medical community, and third-party payors;
- achieving appropriate reimbursement for our product candidates;
- effectively competing with other therapies; and
- maintaining a continued acceptable safety profile of our product candidates following launch.

To the extent we are not able to do any of the foregoing, our business, financial condition, results of operations, stock price and prospects will be materially harmed.

We face significant competition from other biopharmaceutical and biotechnology companies, academic institutions, government agencies, and other research organizations, which may result in others discovering, developing or commercializing products more quickly or marketing them more successfully than us. If their product candidates are shown to be safer or more effective than ours, our commercial opportunity may be reduced or eliminated.

The development and commercialization of cancer immunotherapy products is characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary rights. We face competition with respect to our current product candidates, and will face competition with respect to any product candidates that we may seek to develop or commercialize in the future, from major biopharmaceutical companies, specialty biopharmaceutical companies, and biotechnology companies worldwide. There are a number of large biopharmaceutical and biotechnology companies that currently market and sell products or are pursuing the development of products for the treatment of solid tumors, including oncolytic immunotherapy and cancer vaccine approaches. Potential competitors also include academic institutions, government agencies, and other public and private research organizations that conduct research, seek patent protection, and establish collaborative arrangements for research, development, manufacturing, and commercialization.

While our product candidates are intended to be used in combination with other drugs with different mechanisms of action, if and when marketed they will still compete with a number of drugs that are currently marketed or in development that also target cancer. To compete effectively with these drugs, our product candidates will need to demonstrate advantages in clinical efficacy and safety compared to these competitors when used alone or in combination with other drugs.

Our commercial opportunities could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are easier to administer or are less expensive alone or in combination with other therapies than any products that we may develop alone or in combination with other therapies. Our competitors also may obtain FDA or comparable foreign regulatory authorities' approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the

market. In addition, our ability to compete may be affected in many cases by insurers or other third-party payors coverage decisions.

Many of the companies with which we are competing or may compete in the future have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals, and marketing approved products than we do. Mergers and acquisitions in the biopharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. Early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in developing or acquiring technologies complementary to, or necessary for, our programs. If we are unable to successfully compete with these companies our business, financial condition, results of operations, stock price and prospects may be materially harmed.

If we are unable to establish effective marketing, sales and distribution capabilities or enter into agreements with third parties to market and sell our product candidates, if they are approved, the revenues that we generate may be limited and we may never become profitable.

We currently do not have a commercial infrastructure for the marketing, sale, and distribution of our cancer immunotherapies. If and when our product candidates receive marketing approval, we intend to commercialize our product candidates on our own in the United States and potentially with pharmaceutical or biotechnology partners in other geographies. In order to commercialize our products, we must build our marketing, sales, and distribution capabilities or make arrangements with third parties to perform these services. We may not be successful in doing so. Should we decide to move forward in developing our own marketing capabilities, we may incur expenses prior to product launch or even approval in order to recruit a sales force and develop a marketing and sales infrastructure. If a commercial launch is delayed as a result of the FDA or comparable foreign regulatory authority requirements or other reasons, we would incur these expenses prior to being able to realize any revenue from sales of our product candidates. Even if we are able to effectively hire a sales force and develop a marketing and sales infrastructure, our sales force and marketing teams may not be successful in commercializing our product candidates. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel.

We may also or alternatively decide to collaborate with third-party marketing and sales organizations to commercialize any approved product candidates in the United States, in which event, our ability to generate product revenues may be limited. To the extent we rely on third parties to commercialize any products for which we obtain regulatory approval, we may receive less revenues than if we commercialized these products ourselves, which could materially harm our prospects. In addition, we would have less control over the sales efforts of any other third parties involved in our commercialization efforts, and could be held liable if they failed to comply with applicable legal or regulatory requirements.

We have no prior experience in the marketing, sale, and distribution of biopharmaceutical products, and there are significant risks involved in building and managing a commercial infrastructure. The establishment and development of commercial capabilities, including compliance plans, to market any products we may develop will be expensive and time consuming and could delay any product launch, and we may not be able to successfully develop this capability. We will have to compete with other biopharmaceutical and biotechnology companies, including oncology-focused companies, to recruit, hire, train, manage, and retain marketing and sales personnel, which is expensive and time consuming and

could delay any product launch. Developing our sales capabilities may also divert resources and management attention away from product development.

In the event we are unable to develop a marketing and sales infrastructure, we may not be able to commercialize our product candidates in the United States or elsewhere, which could limit our ability to generate product revenues and materially harm our business, financial condition, results of operations, stock price and prospects. Factors that may inhibit our efforts to commercialize our product candidates include:

- the inability to recruit, train, manage, and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to physicians or persuade adequate numbers of physicians to prescribe our product candidates;
- our inability to effectively oversee a geographically dispersed sales and marketing team;
- the costs associated with training sales and marketing personnel on legal and regulatory compliance matters and monitoring their actions;
- an inability to secure adequate coverage and reimbursement by government and private health plans;
- the clinical indications for which the products are approved and the claims that we may make for the products;
- limitations or warnings, including distribution or use restrictions, contained in the products' approved labeling;
- any distribution and use restrictions imposed by the FDA or comparable foreign regulatory authorities or to which we agree as part of a mandatory REMS or voluntary risk management plan;
- liability for sales or marketing personnel who fail to comply with the applicable legal and regulatory requirements;
- the lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines; and
- unforeseen costs and expenses associated with creating an independent sales and marketing organization or engaging a contract sales organization.

Our product candidates are based on a novel approach to the treatment of cancer, which makes it difficult to predict the time and cost of product candidate development.

We have concentrated all of our research and development efforts on product candidates based on our Immulytic platform, and our future success depends on the successful development of this therapeutic approach. There can be no assurance that any development problems we experience in the future will not cause significant delays or unanticipated costs, or that such development problems can be solved. Should we encounter development problems, including unfavorable preclinical or clinical trial results, the FDA and foreign regulatory authorities may refuse to approve our product candidates, or may require additional information, tests, or trials, which could significantly delay product development and significantly increase our development costs. Moreover, even if we are able to provide the requested information or trials to the FDA, there would be no guarantee that the FDA would accept them or approve our product candidates. We may also experience delays in developing a sustainable, reproducible and scalable manufacturing process,

or developing or qualifying and validating product release assays, other testing and manufacturing methods, and our equipment and facilities in a timely manner, which may prevent us from completing our clinical trials or commercializing our product candidates on a timely or profitable basis, if at all.

In addition, the clinical trial requirements of the FDA and comparable foreign regulatory authorities and the criteria these regulators use to determine the safety and efficacy of a product candidate vary substantially according to the type, complexity, novelty and intended use and market of the potential products. The FDA and comparable foreign regulatory authorities have limited experience with the approval of oncolytic immunotherapies. Only one oncolytic immunotherapy, T-Vec, has received FDA approval to date. Any product candidates that are approved may be subject to extensive post-approval regulatory requirements, including requirements pertaining to manufacturing, distribution, and promotion. We may need to devote significant time and resources to compliance with these requirements.

If our product candidates do not achieve broad market acceptance, the revenues that we generate from their sales may be limited, and we may never become profitable.

We have never commercialized a product candidate for any indication. Even if our product candidates are approved by the appropriate regulatory authorities for marketing and sale, they may not gain acceptance among physicians, patients, third-party payors, and others in the medical community. If any product candidates for which we obtain regulatory approval do not gain an adequate level of market acceptance, we could be prevented from or significantly delayed in achieving profitability. Market acceptance of our product candidates by the medical community, patients, and third-party payors will depend on a number of factors, some of which are beyond our control. For example, physicians are often reluctant to switch their patients and patients may be reluctant to switch from existing therapies even when new and potentially more effective or safer treatments enter the market.

Efforts to educate the medical community and third-party payors on the benefits of our product candidates may require significant resources and may not be successful. If any of our product candidates is approved but does not achieve an adequate level of market acceptance, we could be prevented from or significantly delayed in achieving profitability. The degree of market acceptance of any of our product candidates will depend on a number of factors, including:

- the efficacy of our product candidates in combination with marketed checkpoint blockade drugs;
- the commercial success of the checkpoint blockade drugs with which our products are co-administered;
- the prevalence and severity of adverse events associated with our product candidates or those products with which they are co-administered;
- the clinical indications for which the products are approved and the approved claims that we may make for the products;
- limitations or warnings contained in the product's FDA-approved labeling or those of comparable foreign regulatory authorities, including potential limitations or warnings for our product candidates that may be more restrictive than other competitive products;
- changes in the standard of care for the targeted indications for our product candidates, which could reduce the marketing impact of any claims that we could make following FDA approval or approval by comparable foreign regulatory authorities, if obtained;

- the relative convenience and ease of administration of our product candidates and any products with which they are co-administered;
- the cost of treatment compared with the economic and clinical benefit of alternative treatments or therapies;
- the availability of adequate coverage or reimbursement by third parties, such as insurance companies and other healthcare payors, and by government healthcare programs, including Medicare and Medicaid;
- the price concessions required by third-party payors to obtain coverage;
- the extent and strength of our marketing and distribution of our product candidates;
- the safety, efficacy, and other potential advantages over, and availability of, alternative treatments already used or that may later be approved;
- distribution and use restrictions imposed by the FDA or comparable foreign regulatory authorities with respect to our product candidates or to which we agree as part of a REMS or voluntary risk management plan;
- the timing of market introduction of our product candidates, as well as competitive products;
- our ability to offer our product candidates for sale at competitive prices;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the extent and strength of our third-party manufacturer and supplier support;
- the actions of companies that market any products with which our product candidates are co-administered;
- the approval of other new products;
- adverse publicity about our product candidates or any products with which they are co-administered, or favorable publicity about competitive products; and
- potential product liability claims.

The size of the potential market for our product candidates is difficult to estimate and, if any our assumptions are inaccurate, the actual markets for our product candidates may be smaller than our estimates.

The potential market opportunities for our product candidates are difficult to estimate and will depend in large part on the drugs with which our product candidates are co-administered and the success of competing therapies and therapeutic approaches. In particular, the market opportunity for oncolytic immunotherapies is hard to estimate given that it is an emerging field with only one existing FDA-approved oncolytic immunotherapy, T-Vec, which has yet to enjoy broad market acceptance. Our estimates of the potential market opportunities are predicated on many assumptions, which may include industry knowledge and publications, third-party research reports, and other surveys. Although we believe that our internal assumptions are reasonable, these assumptions involve the exercise of significant judgment on the part of our management, are inherently uncertain, and their reasonableness has not been assessed by an

independent source. If any of the assumptions proves to be inaccurate, the actual markets for our product candidates could be smaller than our estimates of the potential market opportunities.

Negative developments in the field of immuno-oncology could damage public perception of RP1 or any of our other product candidates and negatively affect our business.

The commercial success of our product candidates will depend in part on public acceptance of the use of cancer immunotherapies. Adverse events in clinical trials of RP1 or our other product candidates or in clinical trials of others developing similar products and the resulting publicity, as well as any other negative developments in the field of immuno-oncology that may occur in the future, including in connection with competitor therapies, could result in a decrease in demand for RP1 or our other product candidates that we may develop. These events could also result in the suspension, discontinuation, or clinical hold of or modification to our clinical trials. If public perception is influenced by claims that the use of cancer immunotherapies is unsafe, whether related to our therapies or those of our competitors, our product candidates may not be accepted by the general public or the medical community and potential clinical trial subjects may be discouraged from enrolling in our clinical trials. As a result, we may not be able to continue or may be delayed in conducting our development programs.

As our product candidates consist of a modified virus, adverse developments in anti-viral vaccines or clinical trials of other oncolytic immunotherapy products based on viruses may result in a disproportionately negative effect for RP1 or our other product candidates as compared to other products in the field of immuno-oncology that are not based on viruses. Future negative developments in the field of immuno-oncology or the biopharmaceutical industry could also result in greater governmental regulation, stricter labeling requirements and potential regulatory delays in the testing or approvals of our products. Any increased scrutiny could delay or increase the costs of obtaining marketing approval for RP1 or our other product candidates.

Risks related to our financial position and need for additional capital

We are a clinical-stage biopharmaceutical company with a very limited operating history. We have incurred net losses since our inception and anticipate that we will continue to incur substantial and increasing net losses in the foreseeable future. We may never achieve or sustain profitability.

We are a clinical-stage biopharmaceutical company with a limited operating history, and we are early in our development efforts. We have no products approved for commercial sale and have not generated any revenue from product sales to date, and we continue to incur significant research and development and other expenses related to our ongoing operations. Investment in biopharmaceutical product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that any potential product candidate will fail to demonstrate adequate efficacy or an acceptable safety profile, gain marketing approval and become commercially viable. We have financed our operations to date primarily through the sale of equity securities. Since our inception, most of our resources have been dedicated to the preclinical and clinical development of our Immulytic platform, RP1 and our other product candidates. The size of our future net losses will depend, in part, on our future expenses and our ability to generate revenue, if any.

We are not profitable and have incurred losses in each period since our inception. For the years ended March 31, 2017 and 2018, we reported a net loss of $7.7 million and $19.7 million, respectively. At March 31, 2018, we had an accumulated deficit of $28.9 million. We expect to continue to incur significant losses for the foreseeable future, and we expect these losses to increase as we continue our research and

development of, and seek marketing approvals for, RP1 and any additional product candidates we may develop.

Even if we succeed in receiving marketing approval for and commercialize RP1, we will continue to incur substantial research and development and other expenditures to develop and market additional potential products. We may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital.

We have never generated any revenue from product sales, and our ability to generate revenue from product sales and become profitable will depend significantly on our success in achieving a number of goals.

We have no products approved for commercial sale, have not generated any revenue from product sales, and do not anticipate generating any revenue from product sales until after we have received marketing approval for the commercial sale of a product candidate, if ever. Our ability to generate revenue and achieve profitability depends significantly on our success in achieving a number of goals, including:

- completing research regarding, and preclinical and clinical development of RP1 and our other product candidates;
- obtaining marketing approvals for RP1 and our other product candidates for which we complete clinical trials;
- developing a sustainable and scalable manufacturing process for RP1 and our other product candidates, including establishing and maintaining commercially viable supply and manufacturing relationships with third parties;
- launching and commercializing RP1 and our other product candidates for which we obtain marketing approvals, either directly or with a collaborator or distributor;
- obtaining market acceptance of RP1 and our other product candidates as viable treatment options;
- addressing any competing technological and market developments;
- identifying, assessing, acquiring and developing new product candidates;
- negotiating favorable terms in any collaboration, licensing, or other arrangements into which we may enter;
- obtaining, maintaining, protecting, and expanding our portfolio of intellectual property rights, including patents, trade secrets, and know-how; and
- attracting, hiring, and retaining qualified personnel.

Even if our product candidates or any future product candidates that we develop are approved for commercial sale, we anticipate incurring significant costs associated with commercializing any such product candidate. Our expenses could increase beyond expectations if we are required by the FDA or comparable foreign regulatory authorities to change our manufacturing processes or assays, or to perform clinical, nonclinical, or other types of studies in addition to those that we currently anticipate.

If we are successful in obtaining regulatory approvals to market RP1 or our other product candidates, our revenue will be dependent, in part, upon the size of the markets in the territories for which we gain marketing approval, the accepted price for the product, the ability to get reimbursement at any price, and whether we own the commercial rights for that territory. If the number of our addressable patients is not as significant as we estimate, the indication approved by regulatory authorities is narrower than we expect, the labels for our product candidates contain significant safety warnings, regulatory authorities impose burdensome or restrictive distribution requirements, or the reasonably accepted patient population for treatment is narrowed by competition, physician choice or treatment guidelines, we may not generate significant revenue from sales of such products, even if approved. If we are not able to generate revenue from the sale of any approved products, we could be prevented from or significantly delayed in achieving profitability.

We will require substantial additional financing to achieve our goals, and a failure to obtain this necessary capital when needed on acceptable terms, or at all, could force us to delay, limit, reduce or terminate our product development or commercialization efforts.

Our operations have consumed substantial amounts of cash since inception. At March 31, 2018, our cash and cash equivalents and short-term investments were $61.6 million. We expect to continue to spend substantial amounts to continue the clinical and preclinical development of RP1 and our other product candidates. Accordingly, we will need to obtain substantial additional funds to achieve our business objectives. If we are able to gain marketing approval of any product candidate, we will require significant additional amounts of cash in order to launch and commercialize such product. In addition, other unanticipated costs may arise.

Our future capital requirements depend on many factors, including:

- the scope, progress, results and costs of researching and developing RP1 and our other product candidates, and conducting preclinical studies and clinical trials;
- the timing of, and the costs involved in, obtaining marketing approvals RP1 and our other product candidates if clinical trials are successful;
- the success of any collaborations;
- the cost of commercialization activities for any approved product, including marketing, sales and distribution costs;
- the cost and timing of establishing, equipping, and operating our planned manufacturing facility;
- the cost of manufacturing RP1 and our other product candidates for clinical trials in preparation for marketing approval and commercialization;
- our ability to establish and maintain strategic licensing or other arrangements and the financial terms of such agreements;
- the costs involved in preparing, filing, prosecuting, maintaining, expanding, defending and enforcing patent claims, including litigation costs and the outcome of such litigation;
- the timing, receipt, and amount of sales of, or royalties on, our future products, if any; and
- the emergence of competing cancer therapies and other adverse market developments.

We do not have any committed external source of funds or other support for our development efforts. Until we can generate sufficient product revenue to finance our cash requirements, which we may never do, we expect to finance our future cash needs through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing or distribution arrangements. Based on our research and development plans, we expect that the net proceeds from this offering, together with our existing cash and cash equivalents and short-term investments, will enable us to fund our planned operating expenses and capital expenditure requirements into the second half of 2021. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. In addition, because the design and outcome of our planned and anticipated clinical trials is highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the development and commercialization of RP1 or our other product candidates.

Raising additional capital may cause dilution to our stockholders, including purchasers of common stock in this offering, restrict our operations or require us to relinquish rights to our technologies or product candidates.

To the extent that we raise additional capital through the sale of common stock or securities convertible or exchangeable into common stock, your ownership interest will be diluted. Debt financing, if available, would increase our fixed payment obligations and may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

If we are unable to raise additional funds through equity or debt financings when needed, we may be required to grant rights to develop and market one or more of our product candidates or technologies that we would otherwise prefer to develop and market ourselves.

Risks related to intellectual property

If we are unable to obtain, maintain and protect our intellectual property rights for our technology and product candidates, or if our intellectual property rights are inadequate, our competitive position could be harmed.

Our commercial success will depend in part on our ability to obtain and maintain patent and other intellectual property protection in the United States and other countries with respect to our technology, Immulytic platform, RP1 and our other product candidates. We rely on trade secret, patent, copyright and trademark laws, and confidentiality, licensing and other agreements with employees and third parties, all of which offer only limited protection. We seek to protect our proprietary position by filing and prosecuting patent applications in the United States and abroad related to our technology and product candidates.

The patent positions of biotechnology and pharmaceutical companies generally are highly uncertain, involve complex legal and factual questions and have in recent years been the subject of much litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our licensed patents and any patents we own in the future are highly uncertain. The steps we have taken to protect our proprietary rights may not be adequate to preclude misappropriation of our proprietary information or infringement of our intellectual property rights, both inside and outside of the United States.

Further, the examination process may require us to narrow the claims for our pending patent applications, which may limit the scope of patent protection that may be obtained if these applications issue. The scope of a patent may also be reinterpreted after issuance. The rights that may be granted under our future

issued patents may not provide us with the proprietary protection or competitive advantages we are seeking. If we are unable to obtain and maintain patent protection for our technology or for RP1 or our other product candidates, or if the scope of the patent protection obtained is not sufficient, our competitors could develop and commercialize products similar or superior to ours, and our ability to successfully commercialize RP1 or our other product candidates and future technologies may be adversely affected. It is also possible that we will fail to identify patentable aspects of inventions made in the course of our development and commercialization activities before it is too late to obtain patent protection on them.

In addition, the patent prosecution process is expensive, time-consuming and complex, and we may not be able to file, prosecute, maintain, enforce or license all necessary or desirable patent applications at a reasonable cost or in a timely manner. Although we enter into non-disclosure and confidentiality agreements with parties who have access to confidential or patentable aspects of our research and development output, such as our employees, collaborators, and other third parties, any of these parties may breach the agreements and disclose such output before a patent application is filed, thereby jeopardizing our ability to seek patent protection. It is also possible that we will fail to identify patentable aspects of our research and development efforts in time to obtain patent protection.

For the core technology in our Immulytic platform and each of our product candidates, patent applications are pending under the Patent Cooperation Treaty, or PCT, and are currently at the international stage. As of July 9, 2018, we own five PCT patent applications and four U.S. provisional applications, none of which have been issued by any patent office or examined by any patent examining authority. Any future provisional patent applications are not eligible to become issued patents until, among other things, we file a non-provisional patent application within 12 months of filing of one or more of our related provisional patent applications. If we do not timely file any non-provisional patent applications, we may lose our priority date with respect to our provisional patent applications and any patent protection on the inventions disclosed in our provisional patent applications. Although we intend to timely file non-provisional patent applications relating to our provisional patent applications, we cannot predict whether any of our future patent applications will result in the issuance of patents that effectively protect our technology or RP1 or our other product candidates, or if any of our future issued patents will effectively prevent others from commercializing competitive products. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing or in some cases not at all until they are issued as a patent. Therefore, we cannot be certain that we were the first to make the inventions claimed in our pending patent applications, or that we were the first to file for patent protection of such inventions.

Our pending applications cannot be enforced against third parties practicing the inventions claimed in such applications unless and until a patent issues from such applications. Because the issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, issued patents that we license from third parties or own in the future may be challenged in the courts or patent offices in the United States and abroad, including through opposition proceedings, derivation proceedings, *inter partes* review, interference proceedings or litigation. Such proceedings may result in the loss of patent protection, the narrowing of claims in such patents or the invalidity or unenforceability of such patents, which could limit our ability to stop others from using or commercializing similar or identical products, or limit the duration of the patent protection for our technology. Protecting against the unauthorized use of our patented inventions, trademarks and other intellectual property rights is expensive, time consuming, difficult and in some cases may not be possible. In some cases, it may be difficult or impossible to detect third-party

infringement or misappropriation of our intellectual property rights, even in relation to issued patent claims, and proving any such infringement may be even more difficult. If we are unable to obtain, maintain, and protect our intellectual property our competitive advantage could be harmed, and it could result in a material adverse effect on our business, financial condition, results of operations, stock price and prospects.

If we are unable to protect the confidentiality of our proprietary information and know-how, the value of our technology and products could be adversely affected.

In addition to seeking patent protection, we also rely on other proprietary rights, including protection of trade secrets, know-how and confidential and proprietary information. To maintain the confidentiality of our trade secrets and proprietary information, we enter into confidentiality agreements with our employees, consultants, collaborators and other third parties who have access to our trade secrets. Our agreements with employees also provide that any inventions conceived by the individual in the course of rendering services to us shall be our exclusive property. However, we may not obtain these agreements in all circumstances, and individuals with whom we have these agreements may not comply with their terms. The assignment of intellectual property rights may not be self-executing or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. In addition, in the event of unauthorized use or disclosure of our trade secrets or proprietary information, these agreements, even if obtained, may not provide meaningful protection, particularly for our trade secrets or other confidential information. To the extent that our employees, consultants or contractors use technology or know-how owned by third parties in their work for us, disputes may arise between us and those third parties as to the rights in related inventions.

Adequate remedies may not exist in the event of unauthorized use or disclosure of our confidential information including a breach of our confidentiality agreements. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive, and time consuming, and the outcome is unpredictable. In addition, some courts in and outside of the United States are less willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor or other third party, we would have no right to prevent them from using that technology or information to compete with us. The disclosure of our trade secrets or the independent development of our trade secrets by a competitor or other third party would impair our competitive position and may materially harm our business, financial condition, results of operations, stock price and prospects.

Third parties may in the future initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could harm our business.

Our commercial success depends on our ability and the ability of our current or future collaborators to develop, manufacture, market and sell RP1 and our other product candidates, and to use our related proprietary technologies without infringing, misappropriating or otherwise violating the intellectual property and proprietary rights of third parties. The biotechnology and pharmaceutical industries are characterized by extensive litigation regarding patents and other intellectual property rights. We may become party to, or threatened with, adversarial proceedings or litigation regarding intellectual property rights with respect to our current and any other future product candidates, including interference proceedings, post-grant review, *inter partes* review and derivation proceedings before the U.S. Patent and Trademark Office, or USPTO. Third parties may assert infringement or other intellectual property claims against us based on existing patents or patents that may be granted in the future. If we are found to infringe a third party's intellectual property rights, and we are unsuccessful in demonstrating that such

intellectual property rights are invalid or unenforceable, we could be required to obtain a license from such third party to continue developing, manufacturing and commercializing RP1 and our other product candidates. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors and other third parties access to the same technologies licensed to us, and it could require us to make substantial licensing and royalty payments. We also could be forced, including by court order, to cease developing, manufacturing, and commercializing RP1 or our other product candidates. In addition, in any such proceeding or litigation, we could be found liable for significant monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a patent or other intellectual property right. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations, stock price and prospects. Any claims by third parties that we have misappropriated their confidential information or trade secrets could have a similar material adverse effect on our business.

In addition, we are developing RP1 in combination with nivolumab and cemiplimab, which are covered by patents or licenses held by BMS and Regeneron, respectively, to which we do not have a license other than for use in connection with the applicable clinical trial. We also plan to develop our product candidates in combination with products developed by additional companies that are covered by patents or licenses held by those entities to which we do not have a license. In the event that a labeling instruction is required in product packaging recommending that combination, we could be accused of, or held liable for, infringement of the third-party patents covering the product candidate or product recommended for administration with RP1 or our other product candidates. In such a case, we could be required to obtain a license from the other company or institution to use the required or desired package labeling, which may not be available on commercially reasonable terms, or at all.

We may not be able to protect our intellectual property and proprietary rights throughout the world.

Filing, prosecuting and defending patents on our technology throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws and practices of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop and/or manufacture their own products, and may export otherwise infringing products to territories where we have patent protection but where enforcement is not as strong as that in the United States. These products may compete with our products and our patent claims or other intellectual property rights may not be effective or sufficient to prevent them from so competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the granting or enforcement of patents, trade secrets and other intellectual property protection, particularly those relating to biopharmaceuticals, which could make it difficult for us to obtain patent rights or stop the infringement of our patents or marketing of competing products in violation of our intellectual property and proprietary rights generally in those countries. Proceedings to enforce our intellectual property and proprietary rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could

provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to protect and enforce our intellectual property and proprietary rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property we develop or license.

In addition, the laws of certain foreign countries may not protect our rights to the same extent as the laws of the United States, and those foreign laws may also be subject to change. For example, methods of treatment and manufacturing processes may not be patentable in certain jurisdictions, and the requirements for patentability may differ in certain countries. Furthermore, biosimilar product manufacturers or other competitors may challenge the scope, validity and enforceability of our patents, requiring us to engage in complex, lengthy and costly litigation or proceedings.

Moreover, many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. Many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired and our business and results of operations may be adversely affected.

Obtaining and maintaining patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payments and other similar provisions during the patent application process and to maintain patents after they are issued. For example, periodic maintenance fees, renewal fees, annuity fees and various other government fees on issued patents and patent applications often must be paid to the USPTO and foreign patent agencies over the lifetime of our licensed patents or any patents we own in the future. In certain circumstances, we may rely on future licensing partners to take the necessary action to comply with these requirements with respect to licensed intellectual property. Although an unintentional lapse can be cured for a period of time by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we fail to obtain and maintain the patents and patent applications covering our products or procedures, we may not be able to stop a competitor from marketing products that are the same as or similar to RP1 or our other product candidates, which could have a material adverse effect on our business.

Changes to the patent law in the United States and other jurisdictions could diminish the value of patents in general, thereby impairing our ability to protect RP1 and our other product candidates.

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involves both technological and legal complexity and is therefore costly, time consuming and inherently uncertain. Changes in either the patent laws or interpretation of the patent laws in the United States could increase the uncertainties and costs. Patent reform legislation in the United States and other countries, including the Leahy-Smith America Invents Act, or the Leahy-Smith Act, signed into law on September 16, 2011, could

increase those uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted, redefine prior art and provide more efficient and cost-effective avenues for competitors to challenge the validity of patents. These include allowing third-party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, *inter partes* review, and derivation proceedings. After March 2013, under the Leahy-Smith Act, the United States transitioned to a first inventor to file system in which, assuming that the other statutory requirements are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations, stock price and prospects.

The U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. Depending on future actions by the U.S. Congress, the U.S. courts, the USPTO and the relevant law-making bodies in other countries, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future.

We may become involved in lawsuits to protect or enforce our intellectual property, which could be expensive, time-consuming and unsuccessful and have a material adverse effect on the success of our business.

Competitors may infringe any future licensed patents or any patent we own in the future or misappropriate or otherwise violate our intellectual property rights. We may also be required to defend against claims of infringement and our licensed patents and any patents we own in the future may become involved in priority or other intellectual property related disputes. To counter infringement or unauthorized use, litigation may be necessary in the future to enforce or defend our intellectual property rights, to protect our trade secrets or to determine the validity and scope of our own intellectual property rights or the proprietary rights of others. Also, third parties may initiate legal proceedings against us to assert that we are infringing their intellectual property rights or to challenge the validity or scope of our owned or licensed intellectual property rights. These proceedings can be expensive and time consuming. Many of our current and potential competitors have the ability to dedicate substantially greater resources to conduct intellectual property related litigations or proceedings than we can. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing upon or misappropriating our intellectual property. Litigation and other intellectual property related proceedings could result in substantial costs and diversion of management resources, which could harm our business and financial results. In addition, in an infringement proceeding, a court may decide that a patent owned by or licensed to us is invalid or unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or other intellectual property related proceeding could put one or more of our patents at risk of being invalidated, held unenforceable or interpreted narrowly.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation in the United States, there is a risk that some of our confidential information could be

compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments in any such proceedings. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of shares of our common stock. Any of the foregoing may have a material adverse effect our business, financial condition, results of operations, stock price and prospects.

We may be subject to claims by third parties asserting that our collaborators, employees or we have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Many of our employees, including our senior management team, were previously employed at, or consulted for, universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Our collaborators' employees may currently be or previously have been employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Some of these persons, including each member of our senior management team, executed proprietary rights, non-disclosure and non-competition agreements, or similar agreements, in connection with such previous employment or consulting agreements, that assigned ownership of intellectual property relating to work performed under such agreements to the contracting third party. Although we try to ensure that our employees do not use, claim as theirs, or misappropriate the intellectual property, proprietary information or know-how of others in their work for us, we may be subject to claims that we or these employees have used, claimed as theirs, misappropriated or disclosed intellectual property, including trade secrets or other proprietary information, of any such individual's current or former employer. Litigation may be necessary to defend against such claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel or sustain damages. Such intellectual property rights could be awarded to a third party, and we could be required to obtain a license from such third party to commercialize our technology or products. Such a license may not be available on commercially reasonable terms, or at all. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management. Any of the foregoing may have a material adverse effect on our business, financial condition, results of operations, stock price and prospects.

We may be subject to damages resulting from claims that we or our employees have wrongfully used or disclosed confidential information of third parties or are in breach of non-competition or non-solicitation agreements with our competitors.

We could be subject to claims that we or our employees, including senior management, have inadvertently or otherwise used or disclosed alleged trade secrets or other confidential information of former employers or competitors or others. Although we try to ensure that our employees and consultants do not use the intellectual property, proprietary information, know-how or trade secrets of others in their work for us, we may be subject to claims that we caused an employee to breach the terms of their non-competition or non-solicitation agreement, or that we or these individuals have, inadvertently or otherwise, used or disclosed the alleged trade secrets or other proprietary information of a former employer or competitor or other party. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and could be a distraction to management. If our defenses to these claims fail, in addition to requiring us to pay monetary damages, a court could prohibit us from using technologies or features that are essential to RP1 and our other product candidates, if such technologies or features are found to incorporate or be derived from the trade secrets or other proprietary information of the former employers, competitors or other parties. An inability to incorporate such technologies or features would have a material adverse effect on our business, and may

prevent us from successfully commercializing RP1 and our other product candidates. In addition, we may lose valuable intellectual property rights or personnel as a result of such claims. Moreover, any such litigation or the threat thereof may adversely affect our ability to hire employees or consultants. A loss of key personnel or their work product could hamper or prevent our ability to develop and commercialize RP1 and our other product candidates, which could have an adverse effect on our business, financial condition, results of operations, stock price and prospects.

If we obtain any issued patents covering our technology, such patents could be found invalid or unenforceable if challenged in court or before the USPTO or comparable foreign regulatory authority.

If we or one of our licensing partners initiate legal proceedings against a third party to enforce a patent covering any of our technology, the defendant could counterclaim that the patent covering our product candidate is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. Grounds for a validity challenge could be, among other things, an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, or non-enablement. Grounds for an unenforceability assertion could be, among other things, an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include re-examination, *inter partes* review, post-grant review, interference proceedings, derivation proceedings and equivalent proceedings in foreign jurisdictions, such as opposition proceedings. Such proceedings could result in revocation, cancellation or amendment to our patents in such a way that they no longer cover and protect RP1 and our other product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. For example, with respect to the validity of our licensed patents or any patents we obtain in the future, we cannot be certain that there is no invalidating prior art of which we, our or our licensing partner's patent counsel, and the patent examiner were unaware during prosecution. If a third party were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on RP1 and our other product candidates. Such a loss of patent protection could have a material adverse impact on our business.

Patent terms may be inadequate to protect our competitive position on our products for an adequate amount of time, and our product candidates for which we intend to seek approval as biological products may face competition sooner than anticipated.

Given the amount of time required for the development, testing and regulatory review of new product candidates, such as RP1 and our other product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. In the United States, the Drug Price Competition and Patent Term Restoration Act of 1984 permits a patent term extension of up to five years beyond the normal expiration of the patent, but no longer than 14 years from the product's approval date, which is limited to the approved indication (or any additional indications approved during the period of extension). However, the applicable authorities, including the FDA and the USPTO in the United States, and any equivalent regulatory authorities in other countries, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to our patents, or may grant more limited extensions than we request. If this occurs, our competitors may be able to take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data and launch their products earlier than might otherwise be the case, which could have a material adverse effect on our business, financial condition, results of operations, stock price and prospects.

The enactment of the Biologics Price Competition and Innovation Act of 2009, or BPCIA, as part of the Patient Protection and Affordable Care Act, or ACA, created an abbreviated pathway for the approval of biosimilar and interchangeable biological products. The abbreviated regulatory pathway establishes legal authority for the FDA to review and approve biosimilar biologics, including the possible designation of a biosimilar as "interchangeable" based on its similarity to an existing brand product. Under the BPCIA, an application for a biosimilar product cannot be approved by the FDA until 12 years after the original branded product was approved under a BLA. Certain changes, however, and supplements to an approved BLA, and subsequent applications filed by the same sponsor, manufacturer, licensor, predecessor in interest, or other related entity do not qualify for the 12-year exclusivity period.

RP1 and our other product candidates are all biological product candidates. We anticipate being awarded market exclusivity for each of our biological product candidates that is subject to its own BLA for 12 years in the United States, 10 years in Europe and significant durations in other markets. However, the term of the patents that cover such product candidates may not extend beyond the applicable market exclusivity awarded by a particular country. For example, in the United States, if all of the patents that cover our particular biological product expire before the 12-year market exclusivity expires, a third party could submit a marketing application for a biosimilar product four years after approval of our biological product, the FDA could immediately review the application and approve the biosimilar product for marketing 12 years after approval of our biological product, and the biosimilar sponsor could then immediately begin marketing. Alternatively, a third party could submit a full BLA for a similar or identical product any time after approval of our biological product, and the FDA could immediately review and approve the similar or identical product for marketing and the third party could begin marketing the similar or identical product upon expiry of all of the patents that cover our particular biological product.

There is also a risk that this exclusivity could be changed in the future. For example, this exclusivity could be shortened due to congressional action or through other actions, including future proposed budgets, international trade agreements and other arrangements or proposals. Additionally, there is a risk that the FDA will not consider our product candidates to be reference products for competing products, potentially creating the opportunity for biosimilar competition sooner than anticipated. The extent to which a biosimilar, once approved, will be substituted for any one of our reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing. It is also possible that payers will give reimbursement preference to biosimilars over reference biologics, even absent a determination of interchangeability.

To the extent that we do not receive any anticipated periods of regulatory exclusivity for our product candidates or the FDA or foreign regulatory authorities approve any biosimilar, interchangeable, or other competing products to our product candidates, it could have a material adverse effect on our business, financial condition, results of operations, stock price and prospects.

Risks related to manufacturing and our reliance on third parties

We have agreements with BMS and Regeneron, and in the future may have agreements with other companies, to obtain the supply of anti-PD-1 therapies for the development of RP1 and our other product candidates. If our relationships with BMS, Regeneron, or any future collaborator or supplier are not successful, we may be delayed in completing the development of RP1 and our other product candidates.

We have entered into arrangements with BMS and Regeneron as part of our clinical development for RP1. BMS is providing nivolumab, its anti-PD-1 therapy, for use in our ongoing Phase 1/2 clinical trial with RP1 and Regeneron is providing cemiplimab, its anti-PD-1 therapy, for use in our planned randomized, controlled Phase 2 clinical trial with RP1 in approximately 240 patients with CSCC and other potential clinical trials. We may also enter into agreements with additional companies for the supply of anti-PD-1 therapies for use in the development of RP1 and our other product candidates. The outcome of these clinical trials is dependent both on the performance of our partners' products and product candidates and also on our partners' ability to deliver sufficient quantities of adequately produced product. Should any of our partners' products or product candidates fail to produce the results that we anticipate, we may have to rerun clinical trials for RP1 or our other product candidates or may otherwise be delayed in the commercialization of RP1 or our other product candidates. Similarly, should any partner fail to provide us with a product or product candidate that suits our requirements we may have to rerun clinical trials for RP1 or our other product candidates or may be otherwise delayed in the commercialization of RP1 or our other product candidates.

Our collaboration agreements with any future partners may not be successful, which could adversely affect our ability to develop and commercialize our product candidates.

We may in the future seek collaboration arrangements with other parties for the development or commercialization of our product candidates. The success of any collaboration arrangements may depend on the efforts and activities of our collaborators. Collaborators generally have significant discretion in determining the efforts and resources that they will apply to these arrangements. Disagreements between parties to a collaboration arrangement regarding clinical development and commercialization matters can lead to delays in the development process or commercializing the applicable product candidate and, in some cases, termination of the collaboration arrangement. These disagreements can be difficult to resolve if neither of the parties has final decision making authority.

Collaborations with biopharmaceutical companies and other third parties often are terminated or allowed to expire by the other party. Any such termination or expiration could adversely affect us financially and could harm our business reputation.

Any future collaborations we might enter into may pose a number of risks, including the following:

- collaborators may not perform their obligations as expected;
- collaborators may not pursue development and commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;

- collaborators could fail to make timely regulatory submissions for a product candidate;
- collaborators may not comply with all applicable regulatory requirements or may fail to report safety data in accordance with all applicable regulatory requirements, which could subject them or us to regulatory enforcement actions;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products or product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- product candidates discovered in collaboration with us may be viewed by our collaborators as competitive with their own product candidates or products, which may cause collaborators to cease to devote resources to the commercialization of our product candidates;
- a collaborator with marketing and distribution rights to one or more of our product candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of such product candidate or product;
- disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or termination of the research, development or commercialization of product candidates, might lead to additional responsibilities for us with respect to product candidates, or might result in litigation or arbitration, any of which would be time consuming and expensive;
- collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation; and
- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability.

If any collaborations we might enter into in the future do not result in the successful development and commercialization of products or if one of our collaborators subsequently terminates its agreement with us, we may not receive any future research funding or milestone or royalty payments under such potential future collaboration. If we do not receive the funding we expect under the agreements, our development of our product candidates could be delayed and we may need additional resources to develop our product candidates and our product platform.

Additionally, if any future collaborator of ours is involved in a business combination, the collaborator might deemphasize or terminate development or commercialization of any product candidate licensed to it by us. If one of our collaborators terminates its agreement with us, we may find it more difficult to attract new collaborators and our reputation in the business and financial communities could be adversely affected.

We face significant competition in seeking appropriate collaborators. Our ability to reach a definitive agreement for any collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors.

If we are unable to reach agreements with suitable collaborators on a timely basis, on acceptable terms, or at all, we may have to curtail the development of a product candidate, reduce or delay its development

program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to fund and undertake development or commercialization activities on our own, we may need to obtain additional expertise and additional capital, which may not be available to us on acceptable terms, or at all. If we fail to enter into collaborations and do not have sufficient funds or expertise to undertake the necessary development and commercialization activities, we may not be able to further develop our product candidates or bring them to market or continue to develop our product platform and our business may be materially and adversely affected.

We rely, and expect to continue to rely, on third parties to conduct, supervise, and monitor our preclinical studies and clinical trials. If those third parties do not perform satisfactorily, including failing to meet deadlines for the completion of such trials or failing to comply with regulatory requirements, we may be unable to obtain regulatory approval for our product candidates or any other product candidates that we may develop in the future.

We rely on third-party CROs, study sites, and others to conduct, supervise, and monitor our preclinical studies and clinical trials for our product candidates and do not currently plan to independently conduct preclinical studies or clinical trials of any other potential product candidates. We expect to continue to rely on third parties, such as CROs, clinical data management organizations, medical institutions, and clinical investigators, to conduct our preclinical studies and clinical trials. Although we have agreements governing their activities, we have limited influence over their actual performance and control only certain aspects of their activities. The failure of these third parties to successfully carry out their contractual duties or meet expected deadlines could substantially harm our business because we may be delayed in completing or unable to complete the studies required to support future approval of our product candidates, or we may not obtain marketing approval for or commercialize our product candidates in a timely manner or at all. Moreover, these agreements might terminate for a variety of reasons, including a failure to perform by the third parties. If we need to enter into alternative arrangements our product development activities would be delayed and our business, financial condition, results of operations, stock price and prospects may be materially harmed.

Our reliance on these third parties for development activities will reduce our control over these activities. Nevertheless, we are responsible for ensuring that each of our studies is conducted in accordance with the applicable protocol, legal, regulatory, and scientific standards and our reliance on third parties does not relieve us of our regulatory responsibilities. For example, we will remain responsible for ensuring that each of our trials is conducted in accordance with the general investigational plan and protocols for the trial. We must also ensure that our preclinical trials are conducted in accordance with the FDA's Good Laboratory Practice, or GLP, regulations, as appropriate. Moreover, the FDA and comparable foreign regulatory authorities require us to comply with standards, commonly referred to as GCPs for conducting, recording, and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity, and confidentiality of trial participants are protected. Regulatory authorities enforce these requirements through periodic inspections of trial sponsors, clinical investigators, and trial sites. If we or any of our third parties fail to comply with applicable GCPs or other regulatory requirements, we or they may be subject to enforcement or other legal actions, the data generated in our trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional studies.

In addition, we will be required to report certain financial interests of our third-party investigators if these relationships exceed certain financial thresholds or meet other criteria. The FDA or comparable foreign

regulatory authorities may question the integrity of the data from those clinical trials conducted by investigators who may have conflicts of interest.

We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our trials complies with the applicable regulatory requirements. In addition, our clinical trials must be conducted with product candidates that were produced under cGMP regulations. Failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process. We also are required to register certain clinical trials and post the results of certain completed clinical trials on a government-sponsored database, ClinicalTrials.gov, within specified timeframes. Failure to do so can result in enforcement actions and adverse publicity.

The third parties with which we work may also have relationships with other entities, some of which may be our competitors, for whom they may also be conducting trials or other therapeutic development activities that could harm our competitive position. In addition, such third parties are not our employees, and except for remedies available to us under our agreements with such third parties we cannot control whether or not they devote sufficient time and resources to our ongoing clinical, non-clinical, and preclinical programs. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our preclinical studies or clinical trials in accordance with regulatory requirements or our stated protocols, if they need to be replaced or if the quality or accuracy of the data they obtain is compromised due to the failure to adhere to our protocols, regulatory requirements or for other reasons, our trials may be repeated, extended, delayed, or terminated; we may not be able to obtain, or may be delayed in obtaining, marketing approvals for our product candidates; we may not be able to, or may be delayed in our efforts to, successfully commercialize our product candidates; or we or they may be subject to regulatory enforcement actions. As a result, our results of operations and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenues could be delayed. To the extent we are unable to successfully identify and manage the performance of third-party service providers in the future, our business, financial condition, results of operations, stock price and prospects may be materially harmed.

If any of our relationships with these third parties terminate, we may not be able to enter into arrangements with alternative providers or to do so on commercially reasonable terms. Switching or adding additional third parties involves additional cost and requires management time and focus. In addition, there is a natural transition period when a new third party commences work. As a result, delays could occur, which could compromise our ability to meet our desired development timelines.

We also rely on other third parties to store and distribute our products for the clinical trials that we conduct. Any performance failure on the part of our distributors could delay clinical development, marketing approval, or commercialization of our product candidates, which could result in additional losses and deprive us of potential product revenue.

If the manufacturers upon which we rely fail to produce our product candidates in the volumes that we require on a timely basis, or to fail comply with stringent regulations applicable to biopharmaceutical manufacturers, we may face delays in the development and commercialization of, or be unable to meet demand for, our product candidates and may lose potential revenues.

Until our planned manufacturing facility is complete, we will continue to rely on third-party contract manufacturers to manufacture our clinical trial product supplies. There can be no assurance that our clinical development will not be limited, interrupted, or of satisfactory quality or continue to be available at acceptable prices. In particular, any replacement of our contract manufacturer could require significant effort and expertise because there may be a limited number of qualified replacements. Any delays in

obtaining adequate supplies of our product candidates that meet the necessary quality standards may delay our development or commercialization.

We may not succeed in our efforts to establish manufacturing relationships or other alternative arrangements for any of our product candidates or programs. Our product candidates may compete with other products and product candidates for access to manufacturing facilities. There are a limited number of manufacturers that operate under cGMP regulations and that are both capable of manufacturing and filling our viral product for us and willing to do so. If our existing third-party manufacturers, or the third parties that we engage in the future should cease to work with us, we likely would experience delays in obtaining sufficient quantities of our product candidates for us to meet commercial demand or to advance our clinical trials while we identify and qualify replacement suppliers. If for any reason we are unable to obtain adequate supplies of our product candidates or the therapeutic substances used to manufacture them, it will be more difficult for us to develop our product candidates and compete effectively. Further, even if we do establish such collaborations or arrangements, our third-party manufacturers may breach, terminate, or not renew these agreements.

Any problems or delays we experience in preparing for commercial-scale manufacturing of a product candidate or component may result in a delay in product development timelines and FDA or comparable foreign regulatory authority approval of the product candidate or may impair our ability to manufacture commercial quantities or such quantities at an acceptable cost and quality, which could result in the delay, prevention, or impairment of clinical development and commercialization of our product candidates and may materially harm our business, financial condition, results of operations, stock price and prospects.

We currently have only one contract manufacturer for our product candidates for use in our clinical trials. In addition, we do not have any long-term commitments from our suppliers of clinical trial material or guaranteed prices for our product candidates or their components. The manufacture of biopharmaceutical products requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Manufacturers of therapeutics often encounter difficulties in production, particularly in scaling up initial production. These problems include difficulties with production costs and yields, quality control, including stability of the product candidate and quality assurance testing, shortages of qualified personnel or key raw materials, and compliance with strictly enforced federal, state, and foreign regulations. Our contract manufacturers may not perform as agreed. If our manufacturers were to encounter these or other difficulties, our ability to provide product candidates to patients in our clinical trials could be jeopardized.

Contract manufacturers of our product candidates may be unable to comply with our specifications, applicable cGMP requirements or other FDA, state or foreign regulatory requirements. Poor control of production processes can lead to the introduction of adventitious agents or other contaminants, or to inadvertent changes in the properties or stability of a product candidate that may not be detectable in final product testing. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or other regulatory authorities, they will not be able to secure or maintain regulatory approval for their manufacturing facilities. Any such deviations may also require remedial measures that may be costly and/or time-consuming for us or a third party to implement and that may include the temporary or permanent suspension of a clinical trial or the temporary or permanent closure of a facility. Any such remedial measures imposed upon us or third parties with whom we contract could materially harm our business. Any delays in obtaining products or product candidates that comply with the applicable regulatory requirements may result in delays to clinical trials, product approvals, and commercialization. It may also require that we conduct additional studies.

While we are ultimately responsible for the manufacturing of our product candidates and therapeutic substances, other than through our contractual arrangements, we have little control over our manufacturers' compliance with these regulations and standards. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved. Any new manufacturers would need to either obtain or develop the necessary manufacturing know-how, and obtain the necessary equipment and materials, which may take substantial time and investment. We must also receive FDA approval for the use of any new manufacturers for commercial supply.

A failure to comply with the applicable regulatory requirements, including periodic regulatory inspections, may result in regulatory enforcement actions against our manufacturers or us (including fines and civil and criminal penalties, including imprisonment) suspension or restrictions of production, injunctions, delay or denial of product approval or supplements to approved products, clinical holds or termination of clinical trials, warning or untitled letters, regulatory authority communications warning the public about safety issues with the product candidate, refusal to permit the import or export of the products, product seizure, detention, or recall, operating restrictions, suits under the civil False Claims Act, corporate integrity agreements, consent decrees, withdrawal of product approval, environmental or safety incidents and other liabilities. If the safety of any quantities supplied is compromised due to our manufacturers' failure to adhere to applicable laws or for other reasons, we may not be able to obtain regulatory approval for or successfully commercialize our product candidates.

Any failure or refusal to supply our product candidates or components for our product candidates that we may develop could delay, prevent or impair our clinical development or commercialization efforts. Any change in our manufacturers could be costly because the commercial terms of any new arrangement could be less favorable and because the expenses relating to the transfer of necessary technology and processes could be significant.

If there are delays in completing our planned manufacturing facility, we may be delayed in scaling up manufacturing of our product candidates, may be forced to devote additional resources and management time to completing our manufacturing facility and may face delays in our product development timelines. Additionally, the transition of our manufacturing operations to our new facility may result in further delays or expenses, and we may not experience the anticipated operating efficiencies.

We have signed a lease for an approximately 63,000 square-foot facility in Framingham, Massachusetts at which we intend to establish and equip our own manufacturing facility in order to secure supplies for pivotal studies and commercial launch. This facility is intended to give us control over key aspects of the supply chain for our products and product candidates. We may face delays in the completion of the facility. In addition, we may not experience the anticipated operating efficiencies as we commence manufacturing operations at the new facility. Any such delays may disrupt or delay the supply of our product candidates if we have not maintained a sufficient back-up supply of our product candidates through third-party manufacturers. Moreover, changing manufacturing facilities may also require that we conduct additional studies, make notifications to the regulatory authorities, make additional filings to the regulatory authorities, and obtain regulatory authority approval for the new facilities, which may be delayed or which we may never receive. We will further need to comply with the FDA's and applicable foreign regulatory authorities' cGMP requirements for the production of our product candidates for clinical trials and, if approved, commercial supply, and will be subject to FDA and comparable foreign regulatory authority

inspection. These requirements include the qualification and validation of our manufacturing equipment and processes. We may not be able to develop or acquire the internal expertise and resources necessary for compliance with these requirements. Should we fail to comply with cGMP regulations, the opening of our manufacturing facility will be delayed. If we fail to achieve the operating efficiencies that we anticipate, our manufacturing and operating costs may be greater than expected, which could have a material adverse impact on our operating results.

In order to complete our planned manufacturing facility, we may be forced to devote greater resources and management time than anticipated, particularly in areas relating to operations, quality, regulatory, facilities and information technology. If we experience unanticipated employee turnover in any of these areas, we may not be able to effectively manage our ongoing manufacturing operations and we may not achieve the operating efficiencies that we anticipate from the new facility, which may negatively affect our product development timeline.

Any such problems could result in the delay, prevention, or impairment of clinical development and commercialization of our product candidates and may materially harm our business, financial condition, results of operations, stock price and prospects.

Risks related to legal and compliance matters

We face potential product liability exposure, and if successful claims are brought against us, we may incur substantial liability and have to limit the commercialization of any approved products and/or our product candidates.

The use of our product candidates in clinical trials, and the sale of any product for which we obtain regulatory approval, exposes us to the risk of product liability claims. We face inherent risk of product liability related to the testing of our product candidates in human clinical trials, including liability relating to the actions and negligence of our investigators, and will face an even greater risk if we commercially sell any product candidates that we may develop. For example, we may be sued if any product candidate we develop allegedly causes injury or is found to be otherwise unsuitable during clinical testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability or a breach of warranties. Claims could also be asserted under state consumer protection acts. Product liability claims might be brought against us by consumers, healthcare providers or others using, administering or selling our products. If we cannot successfully defend ourselves against these claims, we will incur substantial liabilities or be required to limit commercialization of our product candidates. Even successful defense would require significant financial and management resources. Regardless of merit or eventual outcome, liability claims may result in:

- loss of revenue from decreased demand for our products and/or product candidates;
- impairment of our business reputation or financial stability;
- costs of related litigation;
- substantial monetary awards to patients or other claimants;
- diversion of management attention;
- withdrawal of clinical trial participants and potential termination of clinical trial sites or entire clinical programs;

- the inability to commercialize our product candidates;
- significant negative media attention;
- decreases in our stock price;
- initiation of investigations and enforcement actions by regulators; and
- product recalls, withdrawals or labeling, marketing or promotional restrictions, including withdrawal of marketing approval.

We believe we have sufficient insurance coverage in place for our business operations. However, our insurance coverage may not reimburse us or may not be sufficient to reimburse us for any expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive, and, in the future, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability. We intend to expand our insurance coverage to include the sale of commercial products if we obtain FDA or comparable foreign regulatory approval for our product candidates in development, but we may be unable to obtain commercially reasonable product liability insurance for any products approved for marketing, or at all. Failure to obtain and retain sufficient product liability insurance at an acceptable cost could prevent or inhibit the commercialization of products we develop. On occasion, large judgments have been awarded in class action lawsuits based on therapeutics that had unanticipated side effects. A successful product liability claim or series of claims brought against us could cause our stock price to fall and, if judgments exceed our insurance coverage, could decrease our cash, and materially harm our business, financial condition, results of operations, stock price and prospects.

We are subject to the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act and other anti-corruption laws, as well as import and export control laws, customs laws, sanctions laws and other laws governing our operations. If we fail to comply with these laws, we could be subject to civil or criminal penalties, other remedial measures, and legal expenses, which could adversely affect our business, financial condition, results of operations, stock price and prospects.

Our operations are subject to anti-corruption laws, including the U.S. Foreign Corrupt Practices Act, or FCPA, the U.K. Bribery Act 2010, or the Bribery Act, and other anti-corruption laws that apply in countries where we do business. The FCPA, the Bribery Act, and these other laws generally prohibit us and our employees and intermediaries from bribing, being bribed or making other prohibited payments to government officials or other persons to obtain or retain business or gain some other business advantage. We also may participate in collaborations and relationships with third parties whose actions, if non-compliant, could potentially subject us to liability under the FCPA, Bribery Act or local anti-corruption laws. In addition, we cannot predict the nature, scope or effect of future regulatory requirements to which our international operations might be subject or the manner in which existing laws might be administered or interpreted.

We are also subject to other laws and regulations governing our international operations, including regulations administered by the governments of the United States and the United Kingdom and authorities in the European Union, including applicable import and export control regulations, economic sanctions on countries and persons, anti-money laundering laws, customs requirements and currency exchange regulations, collectively referred to as the trade control laws.

We can provide no assurance that we will be completely effective in ensuring our compliance with all applicable anti-corruption laws or other legal requirements, including trade control laws. If we are not in compliance with applicable anti-corruption laws or trade control laws, we may be subject to criminal and

civil penalties, disgorgement and other sanctions and remedial measures, and legal expenses, which could have an adverse impact on our business, financial condition, results of operations, stock price and prospects. Likewise, any investigation of any potential violations of these anti-corruption laws or trade control laws by U.S., U.K. or other authorities could also have an adverse impact on our reputation, our business, financial condition, results of operations, stock price and prospects.

If we fail to comply with federal and state healthcare laws, including fraud and abuse and health and other information privacy and security laws, we could face substantial penalties and our business, financial condition, results of operations, stock price and prospects will be materially harmed.

We are subject to many federal and state healthcare laws, including those described in "Business—Regulatory matters," such as the federal Anti-Kickback Statute, the federal civil and criminal False Claims Acts, the civil monetary penalties statute, the Medicaid Drug Rebate statute and other price reporting requirements, the Veterans Health Care Act of 1992, or VHCA, the federal Health Insurance Portability and Accountability Act of 1996 (as amended by the Health Information Technology for Economics and Clinical Health Act, or HITECH), or HIPAA, the FCPA, the ACA, and similar state laws. Even though we do not and will not control referrals of healthcare services or bill directly to Medicare, Medicaid or other third-party payors, certain federal and state healthcare laws, and regulations pertaining to fraud and abuse, reimbursement programs, government procurement, and patients' rights are and will be applicable to our business. We would be subject to healthcare fraud and abuse and patient privacy regulation by both the federal government and the states and foreign jurisdictions in which we conduct our business. In the European Union, the data privacy laws are generally stricter than those which apply in the United States and include specific requirements for the collection of personal data of European Union persons or the transfer of personal data outside of the European Union to the United States to ensure that European Union standards of data privacy will be applied to such data.

If we or our operations are found to be in violation of any federal or state healthcare law, or any other governmental laws or regulations that apply to us, we may be subject to penalties, including civil, criminal, and administrative penalties, damages, fines, disgorgement, suspension and debarment from government contracts, and refusal of orders under existing government contracts, exclusion from participation in U.S. federal or state health care programs, corporate integrity agreements, and the curtailment or restructuring of our operations, any of which could materially adversely affect our ability to operate our business and our financial results. If any of the physicians or other healthcare providers or entities with whom we expect to do business is found not to be in compliance with applicable laws, it may be subject to criminal, civil or administrative sanctions, including but not limited to, exclusions from participation in government healthcare programs, which could also materially affect our business.

Although an effective compliance program can mitigate the risk of investigation and prosecution for violations of these laws, the risks cannot be entirely eliminated. Moreover, achieving and sustaining compliance with applicable federal, state and foreign privacy, data protection, security, reimbursement, and fraud laws may prove costly. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business.

If the government or third-party payors fail to provide adequate coverage, reimbursement and payment rates for our product candidates, or if health maintenance organizations or long-term care facilities choose to use therapies that are less expensive or considered a better value, our revenue and prospects for profitability will be limited.

In both domestic and foreign markets, sales of our products will depend in part upon the availability of coverage and reimbursement from third-party payors. Such third-party payors include government health programs such as Medicare and Medicaid, managed care providers, private health insurers, and other organizations. Coverage decisions may depend upon clinical and economic standards that disfavor new therapeutic products when more established or lower cost therapeutic alternatives are already available or subsequently become available, even if our products are alone in a class. If reimbursement is not available, or is available only to limited levels, our product candidates may be competitively disadvantaged, and we may not be able to successfully commercialize our product candidates. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain a market share sufficient to realize a sufficient return on our or their investments. Alternatively, securing favorable reimbursement terms may require us to compromise pricing and prevent us from realizing an adequate margin over cost.

There is significant uncertainty related to third-party payor coverage and reimbursement of newly approved therapeutics. Marketing approvals, pricing, and reimbursement for new therapeutic products vary widely from country to country. Current and future legislation may significantly change the approval requirements in ways that could involve additional costs and cause delays in obtaining approvals. Some countries require approval of the sale price of a therapeutic before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, prescription biopharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain marketing approval for a product in a particular country, but then be subject to price regulations that delay commercial launch of the product, possibly for lengthy time periods, which may negatively impact the revenues we are able to generate from the sale of the product in that country. Adverse pricing limitations may hinder our ability to recoup our or their investment in one or more product candidates, even if our product candidates obtain marketing approval. Our ability to commercialize our product candidates will depend in part on the extent to which coverage and reimbursement for these products and related treatments will be available from government health administration authorities, private health insurers and other organizations. Regulatory authorities and third-party payors, such as private health insurers, and health maintenance organizations, decide which medications they will cover and establish reimbursement levels. The healthcare industry is acutely focused on cost containment, both in the United States and elsewhere. Several third-party payors are requiring that companies provide them with predetermined discounts from list prices, are using preferred drug lists to leverage greater discounts in competitive classes, are disregarding therapeutic differentiators within classes, are challenging the prices charged for therapeutics, and are negotiating price concessions based on performance goals.

Third-party payors, whether foreign or domestic, or governmental or commercial, are developing increasingly sophisticated methods of controlling healthcare costs. In addition, in the United States, no uniform policy of coverage and reimbursement for products exists among third-party payors. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. Further, we believe that future coverage and reimbursement will likely be subject to increased restrictions both in the United States and in international markets. Third-party coverage and reimbursement for our products or product candidates for which we receive regulatory approval may not be available or adequate in either the United

States or international markets, which could have a negative effect on our business, financial condition, results of operations, stock price and prospects.

Assuming coverage is approved, the resulting reimbursement payment rates might not be adequate. If payors subject our product candidates to maximum payment amounts, or impose limitations that make it difficult to obtain reimbursement, providers may choose to use therapies which are less expensive when compared to our product candidates. Additionally, if payors require high copayments, beneficiaries may seek alternative therapies. We may need to conduct post-marketing studies in order to demonstrate the cost-effectiveness of any products to the satisfaction of hospitals, other target customers and their third-party payors. Such studies might require us to commit a significant amount of management time and financial and other resources. Our products might not ultimately be considered cost-effective. Adequate third-party coverage and reimbursement might not be available to enable us to maintain price levels sufficient to realize an appropriate return on investment in product development.

In addition, federal programs impose penalties on manufacturers of therapeutics in the form of mandatory additional rebates and/or discounts if commercial prices increase at a rate greater than the Consumer Price Index-Urban, and these rebates and/or discounts, which can be substantial, may impact our ability to raise commercial prices. A few states have also passed or are considering legislation intended to prevent significant price increases. Regulatory authorities and third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications, which could affect our ability to sell our product candidates profitably. These payors may not view our products, if any, as cost-effective, and coverage and reimbursement may not be available to our customers, or may not be sufficient to allow our products, if any, to be marketed on a competitive basis. Cost-control initiatives could cause us to decrease, discount, or rebate a portion of the price we, or they, might establish for products, which could result in lower than anticipated product revenues. If the realized prices for our products, if any, decrease or if governmental and other third-party payors do not provide adequate coverage or reimbursement, our prospects for revenue and profitability will suffer.

There may also be delays in obtaining coverage and reimbursement for newly approved therapeutics, and coverage may be more limited than the indications for which the product is approved by the FDA or comparable foreign regulatory authorities. Such delays have made it increasingly common for manufacturers to provide newly approved drugs to patients experiencing coverage delays or disruption at no cost for a limited period in order to ensure that patients are able to access the drug. Moreover, eligibility for reimbursement does not imply that any therapeutic will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale, and distribution. Interim reimbursement levels for new therapeutics, if applicable, may also not be sufficient to cover our costs and may only be temporary. Reimbursement rates may vary, by way of example, according to the use of the product and the clinical setting in which it is used. Reimbursement rates may also be based on reimbursement levels already set for lower cost products or may be incorporated into existing payments for other services.

In addition, third-party payors are increasingly requiring higher levels of evidence of the benefits and clinical outcomes of new technologies, benchmarking against other therapies, seeking performance-based discounts, and challenging the prices charged. We cannot be sure that coverage will be available for any product candidate that we commercialize and, if available, that the reimbursement rates will be adequate. An inability to promptly obtain coverage and adequate payment rates from both government-funded and private payors for any of our product candidates for which we obtain marketing approval could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize products and our overall financial condition.

We are subject to new legislation, regulatory proposals and healthcare payor initiatives that may increase our costs of compliance, and adversely affect our ability to market our products, obtain collaborators, and raise capital.

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of our product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell any products for which we obtain marketing approval. We expect that current laws, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we may receive for any approved products.

For example, legislative changes have been proposed and adopted since the ACA was enacted in 2010. These changes include, among other things, aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, which went effective on April 1, 2013. In addition, the American Taxpayer Relief Act of 2012, among other things, further reduced Medicare payments to several providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. The Centers for Medicare and Medicaid Services, or CMS, promulgated regulations governing manufacturers' obligations and reimbursement under the Medicaid Drug Rebate Program, and recently promulgated a regulation that limited Medicare Part B payment to certain hospitals for outpatient drugs purchased under the 340B program. The current Administration's budget request for fiscal year 2018 also seeks among other health care reforms legislation that would give states more tools to control their Medicaid costs. Changes imposed by recent legislative actions are further described in "Business—Regulatory matters." These new laws may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on customers for our products, if approved, and, accordingly, on our results of operations.

We expect that the ACA, as well as other federal and state healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria, increased regulatory burdens and operating costs, decreased net revenue from our biopharmaceutical products, decreased potential returns from our development efforts, and additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government healthcare programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from commercializing our products and being able to generate revenue, and we could be prevented from or significantly delayed in achieving profitability.

In addition, there have been a number of other legislative and regulatory proposals aimed at changing the biopharmaceutical industry. For instance, the Drug Quality and Security Act imposes obligations on manufacturers of biopharmaceutical products related to product tracking and tracing. Among the requirements of this legislation, manufacturers are required to provide certain information regarding the product to individuals and entities to which product ownership is transferred, will be required to label products with a product identifier, and are required keep certain records regarding the product. The transfer of information to subsequent product owners by manufacturers is also required to be done electronically. Manufacturers are also being required to verify that purchasers of the manufacturers' products are appropriately licensed. Further, manufactures have product investigation, quarantine, disposition, and FDA, other comparable foreign regulatory authorities, and trading partner notification responsibilities related to counterfeit, diverted, stolen, and intentionally adulterated products that would result in serious adverse health consequences of death to humans, as well as products that are the subject

of fraudulent transactions or which are otherwise unfit for distribution such that they would be reasonably likely to result in serious health consequences or death.

Compliance with the federal track and trace requirements may increase our operational expenses and impose significant administrative burdens. As a result of these and other new proposals, we may determine to change our current manner of operation, provide additional benefits or change our contract arrangements, any of which could have a material adverse effect on our business, financial condition, results of operations, stock price and prospects.

Our employees, independent contractors, consultants, commercial partners, principal investigators, CMOs, or CROs may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements and insider trading, which could have a material adverse effect on our business.

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees, independent contractors, consultants, commercial partners, principal investigators, contract manufacturing organizations, or CMOs, or CROs could include intentional, reckless, negligent, or unintentional failures to comply with FDA regulations, comply with applicable fraud and abuse laws, provide accurate information to the FDA, properly calculate pricing information required by federal programs, report financial information or data accurately or disclose unauthorized activities to us. This misconduct could also involve the improper use or misrepresentation of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. It is not always possible to identify and deter this type of misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. Moreover, it is possible for a whistleblower to pursue a False Claims Act case against us even if the government considers the claim unmeritorious and declines to intervene, which could require us to incur costs defending against such a claim. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, financial condition, results of operations, stock price and prospects, including the imposition of significant fines or other sanctions.

Violations of or liabilities under environmental, health and safety laws and regulations could subject us to fines, penalties or other costs that could have a material adverse effect on the success of our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures, the handling, use, storage, treatment and disposal of hazardous materials and wastes and the cleanup of contaminated sites. Our operations involve the use of hazardous and flammable materials, including chemicals and biological and radioactive materials. Our operations also produce hazardous waste products. We would incur substantial costs as a result of violations of or liabilities under environmental requirements in connection with our operations or property, including fines, penalties and other sanctions, investigation and cleanup costs and third-party claims. Although we generally contract with third parties for the disposal of hazardous materials and wastes from our operations, we cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological, hazardous or radioactive materials.

Our internal computer systems, or those of our third-party CROs or other contractors or consultants, may fail or suffer security breaches, which could result in a material disruption of our product candidates' development programs.

Despite our implementation of security measures, our internal computer systems, and those of our CROs, CMOs, IT suppliers and other contractors and consultants are vulnerable to damage from computer viruses, cyber attacks and other unauthorized access, natural disasters, terrorism, war, and telecommunication and electrical failures. If such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our product candidate development programs. For example, the loss of clinical trial data from completed, ongoing or planned clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of or damage to our data or applications, or inappropriate disclosure of personal, confidential or proprietary information, we could incur liability and the further development of any of our product candidates could be delayed.

Risks related to our operations

We will need to expand the size of our organization, and we may experience difficulties in managing this growth, which could disrupt our operations.

As of July 9, 2018, we had 44 full-time employees, including 28 employees engaged in research and development. As our development and commercialization plans and strategies develop, and as we transition into operating as a public company, we expect to need additional managerial, operational, sales, marketing, financial and other personnel. Future growth would impose significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining and motivating additional employees;
- managing our internal development efforts effectively, including the clinical, FDA and comparable foreign regulatory review process for our product candidates, while complying with our contractual obligations to contractors and other third parties; and
- improving our operational, financial and management controls, reporting systems and procedures.

Our future financial performance and our ability to commercialize RP1 and our other product candidates will depend, in part, on our ability to effectively manage any future growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

We currently rely, and for the foreseeable future will continue to rely, in substantial part on certain independent organizations, advisors and consultants to provide certain services. The services include substantially all aspects of clinical trial management and manufacturing, as well as support for our finance and accounting functions. We cannot assure you that the services of independent organizations, advisors and consultants will continue to be available to us on a timely basis when needed, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if

the quality or accuracy of the services provided by consultants is compromised for any reason, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain marketing approval of RP1 and our other product candidates or otherwise advance our business. We cannot assure you that we will be able to manage our existing consultants or find other competent outside contractors and consultants on economically reasonable terms, or at all.

If we are not able to effectively expand our organization by hiring qualified new employees and expanding our groups of consultants and contractors, we may not be able to successfully implement the tasks necessary to further develop and commercialize RP1 and our other product candidates and, accordingly, may not achieve our research, development and commercialization goals.

We are highly dependent on our key personnel, including our founders, Robert Coffin, Ph.D., our President and Chief Executive Officer, Philip Astley-Sparke, our Executive Chairman, Howard Kaufman, M.D., our Chief Medical Officer, and Colin Love, Ph.D., our Chief Operating Officer. If we are not successful in attracting, motivating and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.

Our ability to compete in the highly competitive biotechnology and pharmaceutical industries depends upon our ability to attract, motivate and retain highly qualified managerial, scientific and medical personnel. We are highly dependent on our management and particularly on the services of our founders, as well as our other scientific, manufacturing, quality and medical personnel. Robert Coffin, Ph.D., our President and Chief Executive Officer, Philip Astley-Sparke, our Executive Chairman, and Colin Love, Ph.D., our Chief Operating Officer, were the founder and senior management team of BioVex, where they invented and developed T-Vec, the only oncolytic immunotherapy to receive FDA approval. BioVex was acquired by Amgen Inc., or Amgen, in 2011. Our Chief Medical Officer, Howard Kaufman, M.D., was the principal investigator for the pivotal study upon which T-Vec was approved and previously served as President of the Society for the Immunotherapy of Cancer. We believe that their drug discovery and development experience, and overall biopharmaceutical company management experience, would be difficult to replace. The loss of the services of our key personnel and any of our other executive officers, key employees, and scientific and medical advisors, and our inability to find suitable replacements, could result in delays in product development and harm our business. Furthermore, the historical results, past performance and/or acquisitions of companies with which our founders were affiliated, including BioVex, do not necessarily predict or guarantee similar results for our company.

We conduct our operations at our facilities near Boston, Massachusetts and near Oxford, England, each of which are in regions that are home to many other biopharmaceutical companies and many academic and research institutions. Competition for skilled personnel is intense and the turnover rate can be high, which may limit our ability to hire and retain highly qualified personnel on acceptable terms or at all. We expect that we will need to recruit talent from outside of these regions, and doing so may be costly and difficult.

To induce valuable employees to remain at our company, in addition to salary and cash incentives, we have provided stock option grants that vest over time. The value to employees of these equity grants that vest over time may be significantly affected by movements in our stock price that are beyond our control, and may at any time be insufficient to counteract more lucrative offers from other companies. Although we have employment agreements with our key employees, these employment agreements generally provide for at-will employment, which means that any of our employees could leave our employment at any time, with or without notice. We do not maintain "key man" insurance policies on the lives of all of these individuals or the lives of any of our other employees.

We have identified material weaknesses in our internal control over financial reporting. If we are unable to remediate these material weaknesses, or if we identify additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls, we may not be able to accurately or timely report our financial condition or results of operations, which may adversely affect our business.

In connection with the audits of our consolidated financial statements as of and for the years ended March 31, 2017 and 2018, we identified material weaknesses in our internal control over financial reporting. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. If we are unable to remediate these material weaknesses, or if we identify additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls, we may not be able to accurately or timely report our financial condition or results of operations, which may adversely affect investor confidence in us and, as a result, our stock price and ability to access the capital markets in the future.

The material weaknesses we identified were as follows:

- We did not design or maintain an effective control environment commensurate with our financial reporting requirements. We lacked a sufficient number of professionals with an appropriate level of accounting knowledge, training and experience to appropriately analyze, record and disclose accounting matters timely and accurately. Additionally, the limited personnel resulted in our inability to consistently establish appropriate authorities and responsibilities in pursuit of our financial reporting objectives, as demonstrated by, among other things, our insufficient segregation of duties in our accounting function. This material weakness further contributed to the material weakness below.

- We did not design and maintain formal accounting policies, processes and controls to analyze, account for and disclose complex transactions, including accounting for preferred stock, stock-based compensation, warrant liabilities and leases.

Each of these control deficiencies could result in a misstatement of our accounts or disclosures that would result in a material misstatement of our annual or interim consolidated financial statements that would not be prevented or detected, and accordingly, we determined that these control deficiencies constitute material weaknesses.

These material weaknesses also resulted in adjustments to preferred stock, stock compensation expense, warrant liability and deferred rent in our consolidated financial statements as of and for the year ended March 31, 2017, which were recorded prior to their issuance.

Prior to the completion of this offering, we have been a private company with limited accounting personnel to adequately execute our accounting processes and other supervisory resources with which to address our internal control over financial reporting. We are in the process of implementing measures designed to improve our internal control over financial reporting and remediate the control deficiencies that led to these material weaknesses, including hiring additional finance and accounting personnel and initiating design and implementation of our financial control environment, including the establishment of controls to account for and disclose complex transactions.

We cannot assure you that the measures we have taken to date, and actions we may take in the future, will be sufficient to remediate the control deficiencies that led to these material weaknesses in our internal control over financial reporting or that they will prevent or avoid potential future material weaknesses. In addition, neither our management nor an independent registered public accounting firm has performed an

evaluation of our internal control over financial reporting in accordance with the provisions of the Sarbanes-Oxley Act because no such evaluation has been required. Had we or our independent registered public accounting firm performed an evaluation of our internal control over financial reporting in accordance with the provisions of the Sarbanes-Oxley Act, additional material weaknesses may have been identified. If we are unable to successfully remediate our existing or any future material weaknesses in our internal control over financial reporting, or identify any additional material weaknesses, the accuracy and timing of our financial reporting may be adversely affected, potentially resulting in restatements of our financial statements, we may be unable to maintain compliance with securities law requirements regarding timely filing of periodic reports and applicable Nasdaq listing requirements, investors may lose confidence in our financial reporting, and our share price may decline as a result.

If we fail to maintain proper and effective internal controls over financial reporting our ability to produce accurate and timely financial statements could be impaired.

We are required to maintain internal controls over financial reporting. Commencing with our fiscal year ending the year after this offering is completed, we must perform system and process design evaluation and testing of the effectiveness of our internal controls over financial reporting to allow management to report on the effectiveness of our internal controls over financial reporting in our Form 10-K filing for that year, as required by Section 404 of the Sarbanes-Oxley Act. This will require that we incur substantial additional professional fees and internal costs to expand our accounting and finance functions and that we expend significant management efforts. Prior to this offering, we have never been required to test our internal controls within a specified period and, as a result, we may experience difficulty in meeting these reporting requirements in a timely manner. In addition, in connection with the audits of our consolidated financial statements as of and for the years ended March 31, 2017 and 2018, we identified material weaknesses in our internal control over financial reporting. See "Risk factors—We have identified material weaknesses in our internal control over financial reporting. If we are unable to remediate these material weaknesses, or if we identify additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls, we may not be able to accurately or timely report our financial condition or results of operations, which may adversely affect our business."

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, if our independent registered public accounting firm determines that we continue to have a material weakness or significant deficiency in our internal control over financial reporting, or if we are unable to maintain proper and effective internal controls over financial reporting, we may not be able to produce timely and accurate financial statements. If that were to happen, our investors could lose confidence in our reported financial information, the market price of our stock could decline and we could be subject to sanctions or investigations by the SEC, Nasdaq or other regulatory authorities.

We believe that any internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. We may discover weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our consolidated financial statements. Our internal control over financial reporting will not prevent or detect all errors and all fraud. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. For example, our directors or executive officers could inadvertently fail to disclose a new relationship or arrangement causing us to fail to make a required

related party transaction disclosure. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

Upon the completion of this offering, we will become subject to the periodic reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act. We must design our disclosure controls and procedures to reasonably assure that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. For example, our directors or executive officers could inadvertently fail to disclose a new relationship or arrangement causing us to fail to make a required related party transaction disclosure. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

If we engage in future acquisitions or strategic partnerships, this may increase our capital requirements, dilute our stockholders, cause us to incur debt or assume contingent liabilities, and subject us to other risks.

We may evaluate various acquisitions and strategic partnerships, including licensing or acquiring complementary products, intellectual property rights, technologies, or businesses. Any potential acquisition or strategic partnership may entail numerous risks, including:

- increased operating expenses and cash requirements;
- the assumption of additional indebtedness or contingent liabilities;
- the issuance of our equity securities;
- assimilation of operations, intellectual property and products of an acquired company, including difficulties associated with integrating new personnel;
- the diversion of our management's attention from our existing product programs and initiatives in pursuing such a strategic merger or acquisition;
- retention of key employees, the loss of key personnel, and uncertainties in our ability to maintain key business relationships;
- risks and uncertainties associated with the other party to such a transaction, including the prospects of that party, their regulatory compliance status, and their existing products or product candidates and marketing approvals; and
- our inability to generate revenue from acquired technology and/or products sufficient to meet our objectives in undertaking the acquisition or even to offset the associated acquisition and maintenance costs.

In addition, if we undertake acquisitions, we may issue dilutive securities, assume or incur debt obligations, incur large one-time expenses and acquire intangible assets that could result in significant future amortization expense. Moreover, we may not be able to locate suitable acquisition opportunities and this inability could impair our ability to grow or obtain access to technology or products that may be important to the development of our business. Any of the foregoing may materially harm our business, financial condition, results of operations, stock price and prospects.

Unfavorable market and economic conditions may have serious adverse consequences on our business, financial condition, results of operations, stock price and prospects.

Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. The most recent global financial crisis caused extreme volatility and disruptions in the capital and credit markets. A severe or prolonged economic downturn could result in a variety of risks to our business, including a reduced ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy could also strain our suppliers, possibly resulting in supply disruption. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

At March 31, 2018, we had $61.6 million of cash and cash equivalents and short-term investments. Although we are not aware of any downgrades, material losses, or other significant deterioration in the fair value of our cash equivalents or short-term investments since that date, we cannot assure you that deterioration of the global credit and financial markets would not negatively impact our current portfolio of cash equivalents or short-term investments, or our ability to meet our financing objectives. Furthermore, our stock price may decline due, in part, to the volatility of the stock market and general economic downturns.

Exchange rate fluctuations may materially affect our results of operations and financial conditions

Owing to the international scope of our operations, fluctuations in exchange rates, particularly between the U.S. dollar and the British pound and the euro, may adversely affect us. Although we are based in the United States, we have significant research and development operations in the United Kingdom, and source third-party manufacturing, consulting and other services in the United Kingdom and the European Union. As a result, our business and the price of our common stock may be affected by fluctuations in foreign exchange rates, which may have a significant impact on our results of operations and cash flows from period to period. Currently, we do not have any exchange rate hedging arrangements in place.

Risks related to our common stock and this offering

An active trading market for our common stock may not develop, and you may not be able to resell your shares at or above the initial public offering price.

Prior to this offering, there has been no public market for shares of our common stock. Although our common stock will be approved for listing on Nasdaq, an active trading market for our shares may never develop or be sustained following this offering. The initial public offering price of our common stock was determined through negotiations between us and the underwriters. This initial public offering price may not be indicative of the market price of our common stock after this offering. In the absence of an active trading market for our common stock, investors may not be able to sell their common stock at or above the initial public offering price or at the time that they would like to sell.

The price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock in this offering.

Our stock price is likely to be volatile. The stock market in general and the market for biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, you may not be able to sell your common stock at or above the initial public offering price. The market price for our common stock may be influenced by many factors, including:

- the success of competitive products or technologies;
- results of clinical trials of RP1 and our other product candidates or those of our competitors;
- regulatory or legal developments in the United States and other countries;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to the development of RP1 and our other product candidates or clinical development programs;
- the results of our efforts to discover, develop, acquire or in-license additional product candidates or drugs;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors;
- general economic, industry and market conditions; and
- the other factors described in this "Risk factors" section.

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or our guidance.

Our quarterly and annual operating results may fluctuate significantly in the future, which makes it difficult for us to predict our future operating results. From time to time, we may enter into license or collaboration agreements with other companies that include development funding and significant upfront and milestone payments and/or royalties, which may become an important source of our revenue. Accordingly, our revenue may depend on development funding and the achievement of development and clinical milestones under current and any potential future license and collaboration agreements and sales of our products, if approved. These upfront and milestone payments may vary significantly from period to period and any such variance could cause a significant fluctuation in our operating results from one period to the next.

In addition, we measure compensation cost for stock-based awards made to employees at the grant date of the award, based on the fair value of the award as determined by our board of directors, and recognize the cost as an expense over the employee's requisite service period. As the variables that we use as a

basis for valuing these awards change over time, including, after the completion of this offering, our underlying stock price and stock price volatility, the magnitude of the expense that we must recognize may vary significantly.

Furthermore, our operating results may fluctuate due to a variety of other factors, many of which are outside of our control and may be difficult to predict, including the following:

- the timing and cost of, and level of investment in, research and development activities relating to our current and any future product candidates, which will change from time to time;
- the total expenses we incur in connection with establishing, equipping, and operating our planned manufacturing facility and the actual timing of the facility becoming operational;
- our ability to enroll patients in clinical trials and the timing of enrollment;
- the cost of manufacturing our current and any future product candidates, which may vary depending on the FDA's and comparable foreign regulatory authorities' guidelines and requirements, the quantity of production and the terms of any agreements with manufacturers;
- expenditures that we will or may incur to acquire or develop additional product candidates and technologies;
- the timing and outcomes of clinical and preclinical studies for RP1 and our other product candidates or competing product candidates;
- competition from existing and potential future products that compete with RP1 and our other product candidates, and changes in the competitive landscape of our industry, including consolidation among our competitors or partners;
- any delays in regulatory review or approval of RP1 or our other product candidates;
- the level of demand for RP1 and our other product candidates, if approved, which may fluctuate significantly and be difficult to predict;
- the risk/benefit profile, cost and reimbursement policies with respect to our product candidates, if approved, and existing and potential future products that compete with RP1 and our other product candidates;
- our ability to commercialize RP1 and our other product candidates, if approved, inside and outside of the United States, either independently or working with third parties;
- the success of and our ability to establish and maintain collaborations, licensing or other arrangements;
- our ability to adequately support future growth;
- potential unforeseen business disruptions that increase our costs or expenses;
- future accounting pronouncements or changes in our accounting policies; and
- the changing and volatile global economic environment.

These factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance.

This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated revenue and/or earnings guidance we may provide.

We have broad discretion in how we use the proceeds of this offering and may not use these proceeds effectively, which could affect our results of operations and cause our stock price to decline.

We will have considerable discretion in the application of the net proceeds of this offering. We intend to use the net proceeds from this offering to fund our preclinical and clinical development programs and the establishment and equipping of our planned manufacturing facility, and the remainder for general corporate purposes, including working capital requirements and operating expenses. See "Use of proceeds." As a result, investors will be relying upon management's judgment with only limited information about our specific intentions for the use of the balance of the net proceeds of this offering. We may use the net proceeds for purposes that do not yield a significant return or any return at all for our stockholders. In addition, pending their use, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value.

We do not intend to pay dividends on our common stock so any returns will be limited to the value of our stock.

You should not rely on an investment in our common stock to provide dividend income. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to the appreciation of their stock, which may never occur, as the only way to realize any return on their investment.

If you purchase our common stock in this offering, you will incur immediate and substantial dilution in the book value of your shares.

You will suffer immediate and substantial dilution in the pro forma as adjusted net tangible book value of the common stock you purchase in this offering. Assuming an initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, purchasers of common stock in this offering will experience immediate dilution of $10.11 per share in pro forma as adjusted net tangible book value of the common stock. In addition, investors purchasing common stock in this offering will contribute 53.6% of the total amount invested by stockholders since inception but will only own 21.7% of the shares of common stock outstanding. In the past, we have issued options and other securities to acquire common stock at prices significantly below the initial public offering price. To the extent these outstanding securities are ultimately exercised, investors purchasing common stock in this offering will sustain further dilution. See "Dilution" for a more detailed description of the dilution to new investors in the offering.

Our executive officers, directors, principal stockholders and their affiliates will continue to exercise significant influence over our company after this offering, which will limit your ability to influence corporate matters and could delay or prevent a change in corporate control.

Immediately following the completion of this offering, and disregarding any shares of common stock that they purchase in this offering, the existing holdings of our executive officers, directors, principal stockholders and their affiliates, will represent beneficial ownership, in the aggregate, of approximately

76.5% of our outstanding common stock, assuming no exercise of the underwriters' option to acquire additional common stock in this offering and assuming we issue the number of shares of common stock set forth on the cover page of this prospectus. As a result, these stockholders, if they act together, will be able to influence our management and affairs and the outcome of matters submitted to our stockholders for approval, including the election of directors and any sale, merger, consolidation, or sale of all or substantially all of our assets. These stockholders acquired their shares of common stock for substantially less than the price of the shares of common stock being acquired in this offering, and these stockholders may have interests with respect to their common stock that are different from those of investors in this offering, and the concentration of voting power among these stockholders may have an adverse effect on the price of our common stock. In addition, this concentration of ownership might adversely affect the market price of our common stock by:

- delaying, deferring or preventing a change of control of our company;
- impeding a merger, consolidation, takeover or other business combination involving our company; or
- discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of our company.

See "Principal stockholders" in this prospectus for more information regarding the ownership of our outstanding common stock by our executive officers, directors, principal stockholders and their respective affiliates.

Conflicts of interest may arise because some members of our board of directors are representatives of our principal stockholders.

Certain of our principal stockholders or their affiliates are venture capital funds or other investment vehicles that could invest in entities that directly or indirectly compete with us. As a result of these relationships, when conflicts arise between the interests of the principal stockholders or their affiliates and the interests of other stockholders, members of our board of directors that are representatives of the principal stockholders may not be disinterested. Neither the principal stockholders nor the representatives of the principal stockholders on our board of directors, by the terms of our amended and restated certificate of incorporation, are required to offer us any transaction opportunity of which they become aware and could take any such opportunity for themselves or offer it their other affiliates, unless such opportunity is expressly offered to them solely in their capacity as members of our board of directors.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market after the lock-up and other legal restrictions on resale discussed in this prospectus lapse, the market price of our common stock could decline. Based upon the number of shares of common stock, on an as-converted basis, outstanding as of July 9, 2018, upon the completion of this offering, we will have outstanding a total of 30,838,587 shares of common stock, assuming no exercise of the underwriters' option to purchase an additional 1,005,000 shares. Of these shares, as of the date of this prospectus, approximately 6,700,000 shares, or 22% of our common stock, plus any shares sold upon exercise of the underwriters' option to purchase additional shares, will be freely tradable, without restriction, in the public market immediately following this offering, assuming that current stockholders do not purchase shares in this offering.

The lock-up agreements pertaining to this offering will expire 180 days from the date of this prospectus. After the lock-up agreements expire, based upon the number of shares of common stock, on an as-converted basis, outstanding as of July 9, 2018, up to an additional approximately 24.1 million shares of common stock will be eligible for sale in the public market, approximately 21% of which shares are held by directors, executive officers and other affiliates and will be subject to certain limitations of Rule 144 under the Securities Act, assuming that current stockholders do not purchase shares in this offering. See "Shares eligible for future sale" for more information. J.P. Morgan Securities LLC and Leerink Partners LLC, however, may, in their sole discretion, permit our officers, directors and other stockholders who are subject to these lock-up agreements to sell shares prior to the expiration of the lock-up agreements.

Several of our existing stockholders (or their affiliates), including stockholders affiliated with certain of our directors, have indicated an interest in purchasing up to an aggregate of approximately $40.0 million in shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters could determine to sell more, fewer or no shares to any of these stockholders and any of these stockholders could determine to purchase more, fewer or no shares in this offering. The underwriters will receive the same underwriting discount on any shares purchased by these stockholders as they will on any other shares sold to the public in this offering. The shares purchased by such stockholders in this offering will reduce the available public float of our common shares. As a result, the purchase of common shares by such stockholders in this offering may reduce the liquidity of our common shares relative to what it would have been had these shares been purchased by other investors or not subject to lock-up agreements.

Upon completion of this offering, approximately 6.8 million shares of common stock that are either subject to outstanding options, reserved for future issuance under our equity incentive plans or subject to outstanding warrants will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements and Rule 144 and Rule 701 under the Securities Act. If these additional shares of common stock are sold, or if it is perceived that they will be sold, in the public market, the market price of our common stock could decline.

After the completion of this offering, the holders of approximately 19.7 million shares of our common stock, or their permitted transferees, will be entitled to rights with respect to the registration of their shares under the Securities Act, subject to the lock-up agreements described above. See "Certain relationships and related party transactions—Stockholder agreements—Investors' rights agreement." Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares purchased by affiliates. Any sales of securities by these stockholders could have a material adverse effect on the market price of our common stock.

We will incur significantly increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. We will be subject to the reporting requirements of the Exchange Act, which will require, among other things, that we file with the SEC annual, quarterly and current reports with respect to our business and financial condition. In addition, the Sarbanes-Oxley Act, and related SEC and Nasdaq rules impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Further, in July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, was enacted. There are significant corporate governance and executive compensation-related

provisions in the Dodd-Frank Act that require the SEC to adopt additional rules and regulations in these areas such as "say on pay" and proxy access. Recent legislation permits emerging growth companies to implement many of these requirements over a longer period and up to five years from the pricing of this offering. We intend to take advantage of this new legislation, but cannot guarantee that we will not be required to implement these requirements sooner than budgeted or planned and thereby incur unexpected expenses. Stockholder activism, the current political environment and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate.

We expect the rules and regulations applicable to public companies to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly. If these requirements divert the attention of our management and personnel from other business concerns, they could have a material adverse effect on our business, financial condition, results of operations, stock price and prospects. The increased costs will decrease our net income or increase our net loss, and may require us to reduce costs in other areas of our business. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain the same or similar coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

If securities analysts do not publish research or reports about our business or if they publish negative evaluations of our stock, the price of our stock could decline.

The trading market for our common stock will rely, in part, on the research and reports that industry or financial analysts publish about us or our business. We may never obtain research coverage by industry or financial analysts. If no or few analysts commence coverage of us, the trading price of our stock would likely decrease. Even if we do obtain analyst coverage, if one or more of the analysts covering our business downgrade their evaluations of our stock, the price of our stock could decline. If one or more of these analysts cease to cover our stock, we could lose visibility in the market for our stock, which, in turn, could cause our stock price to decline.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of our company, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws may delay or prevent an acquisition of our company or a change in our management. These provisions include a classified board of directors and the ability of our board of directors to issue preferred stock without stockholder approval. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, or DGCL, which limits the ability of stockholders owning in excess of 15% of our outstanding voting stock to merge or combine with our company. Although we believe these provisions collectively provide for an opportunity to obtain greater value for stockholders by requiring potential acquirers to negotiate with our board of directors, they would apply even if an offer rejected by our board were considered beneficial by some stockholders. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, which is responsible for appointing the members of our management.

We are an emerging growth company, and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common stock less attractive to investors.

We are an emerging growth company. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements and exemptions from the requirements of holding nonbinding advisory votes on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an emerging growth company for up to five years following the year in which we complete this offering, although circumstances could cause us to lose that status earlier. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of this offering, (b) in which we have total annual gross revenue of at least $1.07 billion or (c) in which we are deemed to be a large accelerated filer, which requires the market value of our common stock that is held by non-affiliates to exceed $700.0 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

Even after we no longer qualify as an emerging growth company, we may still qualify as a "smaller reporting company" which would allow us to take advantage of many of the same exemptions from disclosure requirements including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. As a result, changes in rules of U.S. generally accepted accounting principles or their interpretation, the adoption of new guidance or the application of existing guidance to changes in our business could significantly affect our financial position and results of operations.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware and the federal district courts of the United States of America will be the exclusive forums for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for:

- any derivative action or proceeding brought on our behalf;
- any action asserting a breach of fiduciary duty;
- any action asserting a claim against us arising under the DGCL, our amended and restated certificate of incorporation, or our amended and restated bylaws; and
- any action asserting a claim against us that is governed by the internal-affairs doctrine.

Our amended and restated certificate of incorporation further provides that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

These exclusive-forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees, which may discourage lawsuits against us and our directors, officers, and other employees. If a court were to find either exclusive-forum provision in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could seriously harm our business.

Special note regarding forward-looking statements

This prospectus contains forward-looking statements concerning our business, operations and financial performance and condition, as well as our plans, objectives and expectations for our business operations and financial performance and condition. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements. In some cases, you can identify these forward-looking statements by the use of words such as "outlook," "believes," "expects," "potential," "continues," "may," "will," "should," "seeks," "approximately," "predicts," "intends," "plans," "estimates," "anticipates" or the negative version of these words or other comparable words. Such forward-looking statements are subject to various risks and uncertainties. Accordingly, there are or will be important factors that could cause actual outcomes or results to differ materially from those indicated in these statements. We believe these factors include, among other things:

- the timing, progress, and results of preclinical studies and clinical trials for RP1 or any of our other product candidates, including the timing of initiation and completion of studies or trials and related preparatory work and the period during which the results of the trials will become available;
- the timing, scope or likelihood of regulatory filings and approvals, including timing of our BLA filing for, and final FDA approval of, RP1 or any of our other product candidates;
- the timing, scope, or likelihood of foreign regulatory filings and approvals;
- our ability to develop our product candidates for use in combination with other checkpoint blockade therapies, including anti-PD-1;
- our ability to develop and advance any future product candidates into, and successfully complete, clinical trials;
- our expectations regarding the size of the patient populations for RP1 or our other product candidates if approved for commercial use;
- the costs and timing of establishing, equipping, and operating our planned in-house manufacturing facility;
- the implementation of our business model and our strategic plans for our business, RP1 and our other product candidates;
- the rate and degree of market acceptance and clinical utility of RP1 or our other product candidates;
- the potential benefits of and our ability to establish or maintain future collaborations or strategic relationships;
- our ability to obtain additional funding as necessary;
- our ability to retain the continued service of our key professionals and to identify, hire and retain additional qualified professionals;
- our intellectual property position, including the scope of protection we are able to establish and maintain for intellectual property rights covering RP1 and our other product candidates, claims others may make regarding rights in our intellectual property, and any potential infringement, misappropriation or other violation of any third-party intellectual property rights;

- our ability to remediate our existing material weaknesses and to design and maintain an effective system of internal controls;
- our competitive position, and developments and projections relating to our competitors and our industry;
- negative developments in the field of immuno-oncology;
- our expectations related to the use of proceeds from this offering;
- our estimates regarding expenses and capital requirements;
- the impact of laws and regulations;
- our expectations regarding the time during which we will be an emerging growth company under the JOBS Act; and
- the other risks and uncertainties described under "Risk factors."

The forward-looking statements made in this prospectus relate only to events as of the date on which the statements are made. These factors should not be construed as exhaustive and should be read in conjunction with the other cautionary statements that are included in this prospectus. Moreover, we operate in a competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this prospectus. We undertake no obligation to publicly update or review any forward-looking statement, whether as a result of new information, future developments or otherwise, except to the extent required by applicable law. You should not rely on forward-looking statements as predictions of future events. We may not actually achieve the plans, intentions, or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements.

Market data

This prospectus includes market and industry data and forecasts concerning our business and the markets for certain cancers, including data regarding the estimated size of those markets and the incidence and prevalence of certain medical conditions, that we have derived from independent consultant reports, publicly available information, various industry, medical and general publications, other published industry sources, government data and our internal data and estimates. Independent consultant reports, industry publications and other published industry sources generally indicate that the information contained therein was obtained from sources believed to be reliable.

Our internal data and estimates are based upon information obtained from trade and business organizations and other contacts in the markets in which we operate and our management's understanding of industry conditions.

Use of proceeds

We estimate that the net proceeds from the sale of 6,700,000 shares of common stock in this offering will be approximately $90.8 million, or approximately $104.8 million if the underwriters exercise their option to purchase additional shares in full, based on an assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We currently expect to use the net proceeds from this offering, together with our existing cash and cash equivalents and short-term investments, as follows:

- approximately $20.0 million to fund the development of RP1 through the completion of the ongoing Phase 1/2 clinical trial in four solid tumor types;
- approximately $15.0 million to fund our share of the costs to fully recruit our planned Phase 2 clinical trial with RP1 in CSCC;
- approximately $20.0 million to fund the completion of the preclinical development and the initial clinical trials of RP2 in approximately 100 patients;
- approximately $10.0 million to fund the completion of preclinical development and a Phase 1 clinical trial of RP3;
- approximately $20.0 million to fund capital expenditures associated with establishing and equipping our planned manufacturing facility in Framingham, Massachusetts; and
- the remainder for general corporate purposes, including working capital requirements and operating expenses.

This expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds from this offering or the amounts that we will actually spend on the uses set forth above. The amount and timing of our actual expenditures depend on several factors, including the progress and results of our research and development efforts, the amount of cash used by our operations, and the other factors described under "Risk factors." Accordingly, we will retain broad discretion in the allocation of the net proceeds from this offering. However, based on our current plans, we believe that the expected net proceeds from this offering, together with our existing cash and cash equivalents and short-term investments, will enable us to fund our operating expenses and capital expenditure requirements into the second half of 2021. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. See "Management's discussion and analysis of financial condition and results of operations—Liquidity and capital resources." Pending application of the net proceeds, we intend to invest the net proceeds from this offering in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

A $1.00 increase (decrease) in the assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the net proceeds to us from this offering by approximately $6.2 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. An increase (decrease) of 1,000,000 shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) the net proceeds to us from this offering by approximately $14.0 million, assuming no change in the assumed initial public offering price per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Dividend policy

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings for use in the operation of our business and do not anticipate paying any dividends on our common stock in the foreseeable future. Any future determination to declare dividends will be made at the discretion of our board of directors and will depend on our financial condition, operating results, capital requirements, contractual restrictions, business prospects, general business conditions and other factors that our board of directors may deem relevant.

Capitalization

The following table sets forth our cash and cash equivalents and short-term investments and capitalization as of March 31, 2018 on:

- an actual basis;
- a pro forma basis to give effect to:
    - the conversion of all outstanding shares of our preferred stock into an aggregate of 19,157,360 shares of our common stock upon the completion of this offering;
    - all outstanding warrants to purchase shares of series seed preferred stock becoming warrants to purchase shares of common stock upon the completion of this offering;
    - all outstanding shares of our common A stock being repurchased by us and canceled immediately prior to the completion of this offering; and
    - the filing and effectiveness, as of immediately prior to the completion of this offering, of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws.
- on a pro forma as adjusted basis to give further effect to our issuance and sale of 6,700,000 shares of common stock in this offering at an assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma and pro forma as adjusted information below assumes that this offering was completed on March 31, 2018. The pro forma as adjusted information below is illustrative only, and our capitalization following the completion of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read the information in this table together with the information contained in this prospectus, including "Use of proceeds," "Management's

discussion and analysis of financial condition and results of operations" and "Description of capital stock" and our consolidated financial statements and related notes appearing at the end of this prospectus.

	As of March 31, 2018		
	Actual	Pro forma	Pro forma as adjusted
	(Amounts in thousands, except share and per share data)		
Cash and cash equivalents and short-term investments	$ 61,551	$ 61,551	$ 152,316
Warrant liability	$ 1,642	$ —	$ —
Convertible preferred stock (series seed, A and B), $0.001 par value; 1,975,968 shares authorized as of March 31, 2018; 1,925,968 shares issued and outstanding as of March 31, 2018; no shares issued or outstanding, pro forma and pro forma as adjusted as of March 31, 2018	86,361	—	—
Stockholders' equity (deficit):			
Common stock, $0.001 par value; 27,314,288 shares authorized (inclusive of 26,258 shares of common A stock) as of March 31, 2018; 5,007,485 shares issued and outstanding (inclusive of 26,258 shares of common A stock) as of March 31, 2018; 24,138,587 shares issued and outstanding, pro forma as of March 31, 2018; 30,838,587 shares issued and outstanding, pro forma as adjusted as of March 31, 2018	5	24	31
Additional paid-in capital	1,097	89,081	179,839
Accumulated deficit	(28,932)	(28,932)	(28,932)
Accumulated other comprehensive loss	(238)	(238)	(238)
Total stockholders' equity (deficit)	(28,068)	59,935	150,700
Total capitalization	$ 59,935	$ 59,935	$ 150,700

A $1.00 increase (decrease) in the assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) each of cash and cash equivalents and short-term investments, additional paid-in capital, total stockholders' equity (deficit) and total capitalization on a pro forma as adjusted basis by approximately $6.2 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. An increase (decrease) of 1,000,000 shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) each of cash and cash equivalents and short-term investments, additional paid-in capital, total stockholders' equity (deficit) and total capitalization on a pro forma as adjusted basis by approximately $14.0 million, assuming the assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The actual, pro forma and pro forma as adjusted information set forth in the table excludes:

- 2,520,247 shares of common stock issuable upon the exercise of stock options outstanding as of March 31, 2018 at a weighted average exercise price of $2.72 per share;
- 3,486,118 shares of common stock reserved for future issuance under our 2018 Plan, which will become effective upon the effectiveness of the registration statement of which this prospectus is a part;
- 348,612 shares of our common stock reserved for future issuance under our ESPP, which will become effective upon the effectiveness of the registration statement of which this prospectus is a part;
- 131,850 shares of our common stock reserved for future issuance as of March 31, 2018 under our 2017 Plan, which will become available for issuance under our 2018 Plan upon the effectiveness of our 2018 Plan; and
- 497,344 shares of common stock issuable upon the exercise of warrants outstanding as of March 31, 2018 at an exercise price of $1.01 per share.

Dilution

If you invest in our common stock in this offering, your ownership interest will be diluted immediately to the extent of the difference between the initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering.

Our historical net tangible book value (deficit) as of March 31, 2018 was $(28.1) million, or $(5.63) per share of our common stock. Our historical net tangible book value (deficit) is the amount of our total tangible assets less our total liabilities and the carrying value of our preferred stock, which is not included within our stockholders' equity (deficit). Historical net tangible book value per share represents historical net tangible book value (deficit) divided by the number of shares of our common stock issued as of March 31, 2018.

Our pro forma net tangible book value as of March 31, 2018 was $59.9 million, or $2.48 per share of our common stock. Pro forma net tangible book value (deficit) represents the amount of our total tangible assets less our total liabilities, after giving effect to (i) the conversion of all outstanding shares of our preferred stock into an aggregate of 19,157,360 shares of common stock upon the completion of this offering and (ii) all outstanding warrants to purchase shares of series seed preferred stock becoming warrants to purchase shares of common stock upon the completion of this offering, in each case assuming that this offering was completed on March 31, 2018. Pro forma net tangible book value per share represents pro forma net tangible book value divided by the total number of shares of our common stock issued as of March 31, 2018, after giving effect to the conversion of all outstanding shares of our preferred stock into an aggregate of 19,157,360 shares of our common stock upon the completion of this offering.

After giving further effect to our sale of 6,700,000 shares of common stock in this offering at an assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of March 31, 2018 would have been $150.7 million, or $4.89 per share. This represents an immediate increase in pro forma as adjusted net tangible book value per share of $2.41 to our existing stockholders and an immediate dilution in pro forma as adjusted net tangible book value per share of $10.11 to new investors purchasing common stock in this offering. Dilution per share to new investors purchasing common stock in this offering is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from the assumed initial public offering price per share paid by new investors.

The following table illustrates this dilution on a per share basis assuming the underwriters do not exercise their option to purchase additional shares of common stock:

Assumed initial public offering price per share		$ 15.00
Historical net tangible book value (deficit) per share as of March 31, 2018	$ (5.63)	
Increase per share attributable to the pro forma adjustments described above	8.11	
Pro forma net tangible book value per share as of March 31, 2018	2.48	
Increase in pro forma as adjusted net tangible book value per share attributable to new investors purchasing common stock in this offering	2.41	
Pro forma as adjusted net tangible book value per share after this offering		4.89
Dilution per share to new investors purchasing common stock in this offering		$ 10.11

The dilution information discussed above is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing.

A $1.00 increase (decrease) in the assumed initial public offering price of $15.00 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) our pro forma as adjusted net tangible book value per share after this offering by $0.20 and dilution per share to new investors purchasing common stock in this offering by $0.80, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. An increase of 1,000,000 shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase the pro forma as adjusted net tangible book value per share after this offering by $0.28 and decrease the dilution per share to new investors purchasing common stock in this offering by $0.28, assuming no change in the assumed initial public offering price and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. A decrease of 1,000,000 shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would decrease the pro forma as adjusted net tangible book value per share after this offering by $0.31 and increase the dilution per share to new investors purchasing common stock in this offering by $0.31, assuming no change in the assumed initial public offering price and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise their option to purchase additional shares of common stock in this offering in full at the assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus and assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, the pro forma as adjusted net tangible book value per share after this offering would be $5.17 per share, and the decrease in dilution in pro forma as adjusted net tangible book value per share to new investors purchasing common stock in this offering would be $0.28 per share.

The following table summarizes, as of March 31, 2018 on the same pro forma as adjusted basis as described above, the total number of shares of common stock purchased from us, the total cash consideration paid to us and the average price per share of common stock paid by our existing investors and by new investors purchasing shares of common stock in this offering at an assumed initial public offering price of $15.00 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, before deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. As the table shows, new investors purchasing common stock in this offering will pay an average price per share substantially higher than our existing investors paid.

	Shares of common stock purchased		Total consideration		Average price per share of common stock
	Number	Percent	Amount	Percent	
Existing investors	24,138,157	78.3%	$ 86,949,678	46.4%	$ 3.60
New investors	6,700,000	21.7	100,500,000	53.6	15.00
Total	30,838,587	100.0%	$ 187,449,678	100.0%	

The table above assumes no exercise of the underwriters' option to purchase additional shares in this offering. If the underwriters' option to purchase additional shares is exercised in full, the number of shares

of our common stock held by existing stockholders would be reduced to 75.8% of the total number of shares of our common stock outstanding after this offering, and the number of shares of common stock held by new investors participating in the offering would be increased to 24.2% of the total number of shares outstanding after this offering.

A $1.00 increase (decrease) in the assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the total consideration paid by new investors by $6.7 million and, in the case of an increase, would increase the percentage of total consideration paid by new investors by 1.6 percentage points and, in the case of a decrease, would decrease the percentage of total consideration paid by new investors by 1.7 percentage points, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. An increase (decrease) of 1,000,000 shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) the total consideration paid by new investors by $15.0 million and, in the case of an increase, would increase the percentage of total consideration paid by new investors by 3.4 percentage points and, in the case of a decrease, would decrease the percentage of total consideration paid by new investors by 4.0 percentage points, assuming no change in the assumed initial public offering price.

The table above does not include:

- 2,520,247 shares of common stock issuable upon the exercise of stock options outstanding as of March 31, 2018 at a weighted average exercise price of $2.72 per share;
- 3,486,118 shares of common stock reserved for future issuance under our 2018 Plan, which will become effective upon the effectiveness of the registration statement of which this prospectus is a part;
- 348,612 shares of our common stock reserved for future issuance under our ESPP, which will become effective upon the effectiveness of the registration statement of which this prospectus is a part;
- 131,850 shares of our common stock reserved for future issuance as of March 31, 2018 under our 2017 Plan, which will become available for issuance under our 2018 Plan upon the effectiveness of our 2018 Plan;
- 497,344 shares of common stock issuable upon the exercise of warrants outstanding as of March 31, 2018 at an exercise price of $1.01 per share; and
- 26,258 shares of common A stock outstanding as of March 31, 2018, all of which will be repurchased by us and canceled immediately prior to the completion of this offering.

We may choose to raise additional capital through the sale of equity or convertible debt securities due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. New investors will experience further dilution if any of our outstanding options are exercised, new options are issued and exercised under our equity incentive plan or we issue additional shares of common stock, other equity securities or convertible debt securities in the future. See "Risk factors—If you purchase our common stock in this offering, you will incur immediate and substantial dilution in the book value of your shares."

Selected consolidated financial data

You should read the following selected consolidated financial data together with our consolidated financial statements and the related notes appearing at the end of this prospectus and the "Management's discussion and analysis of financial condition and results of operations" section of this prospectus. We have derived the consolidated statement of operations data for the years ended March 31, 2017 and 2018 and the consolidated balance sheet data as of March 31, 2017 and 2018 from our audited consolidated financial statements appearing at the end of this prospectus. Our historical results are not necessarily indicative of results that should be expected in any future period.

	Year ended March 31,	
	2017	2018
	(Amounts in thousands, except share and per share data)	
Consolidated statement of operations data		
Operating expenses:		
Research and development	$ 6,936	$ 13,516
General and administrative	2,711	5,713
Total operating expenses	9,647	19,229
Loss from operations	(9,647)	(19,229)
Other income (expense):		
Research and development incentives	1,442	2,267
Interest income	25	288
Change in fair value of warrant liability	(150)	(972)
Other income (expense), net	626	(2,056)
Total other income (expense), net	1,943	(473)
Net loss	(7,704)	(19,702)
Net loss attributable to common stockholders	$ (7,704)	$ (19,702)
Net loss per share attributable to common stockholders, basic and diluted[(1)]	$ (1.55)	$ (3.96)
Weighted average common shares outstanding, basic and diluted[(1)]	4,973,439	4,978,539
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)[(1)]		$ (0.87)
Pro forma weighted average common shares outstanding, basic and diluted (unaudited)[(1)]		21,506,697

(1) See Note 12 to our consolidated financial statements appearing at the end of this prospectus for further details on the calculation of basic and diluted net loss per share attributable to common stockholders and unaudited basic and diluted pro forma net loss per share attributable to common stockholders.

	March 31, 2017	March 31, 2018
	(Amounts in thousands)	
Consolidated balance sheet data		
Cash and cash equivalents and short-term investments	$ 20,594	$ 61,551
Working capital[(1)]	20,417	59,539
Total assets	22,819	65,151
Warrant liability	670	1,642
Total liabilities	2,725	6,858
Convertible preferred stock	31,609	86,361
Total stockholders' equity (deficit)	(11,515)	(28,068)

(1) We define working capital as current assets less current liabilities.

Management's discussion and analysis of financial condition and results of operations

You should read this discussion and analysis of our financial condition and consolidated results of operations together with the consolidated financial statements, related notes and other financial information included in this prospectus. The following discussion and other parts of this prospectus may contain predictions, estimates and other forward-looking statements that involve a number of risks and uncertainties, including those discussed under "Risk factors" and elsewhere in this prospectus. These risks could cause our actual results to differ materially from any future performance suggested below. Accordingly, you should read "Special note regarding forward-looking statements" and "Risk factors."

Overview

We are a clinical-stage biotechnology company committed to applying our leading expertise in the field of oncolytic immunotherapy to transform the lives of cancer patients. We use our proprietary Immulytic platform to design and develop product candidates that are intended to maximally activate the immune system against solid tumors. We are conducting a Phase 1/2 clinical trial in the United Kingdom and, pending the opening of an IND, in the United States with our lead product candidate, RP1, in approximately 150 patients with a range of solid tumors. In addition, in the first half of 2019, we plan to initiate a randomized, controlled Phase 2 clinical trial of RP1 in combination with cemiplimab, versus cemiplimab alone, in approximately 240 patients with cutaneous squamous cell carcinoma, or CSCC, which we are designing to potentially support product registration. We also intend to initiate a clinical trial for our second product candidate, RP2, in the first half of 2019.

Oncolytic immunotherapy is an emerging class of cancer treatment that exploits the ability of certain viruses to selectively replicate in and directly kill tumors, as well as induce a potent, patient-specific, anti-tumor immune response. Such oncolytic, or "cancer killing," viruses have the potential to generate an immune response targeted to an individual patient's particular set of tumor antigens, including to neo-antigens that are uniquely present in tumors. Our product candidates incorporate multiple mechanisms of action into single product candidates in a practical, "off-the-shelf" format that is intended to maximize the immune response against a patient's cancer and to offer significant advantages over personalized vaccine approaches. Our management team has worked together for more than ten years and successfully developed the first oncolytic immunotherapy, Imlygic, also known as T-Vec, which was approved by the FDA for the treatment of advanced melanoma in 2015.

The foundation of our Immulytic platform consists of a proprietary, engineered strain of herpes simplex virus 1, or HSV-1, that has been "armed" with a fusogenic therapeutic protein intended to substantially increase anti-tumor activity. Our platform enables us to design multiple product candidates that incorporate various further genes whose expression is intended to augment the inherent properties of HSV-1 to both directly destroy tumor cells and induce an anti-tumor immune response.

We believe our lead product candidate, RP1, and our other product candidates will be effective at killing tumors and inducing immunogenic, or immune-stimulating, tumor cell death and that it will be highly synergistic with immune checkpoint blockade therapies.

We began operations as Replimune Limited, an English limited company that was incorporated in 2015. On July 5, 2017, Replimune Group, Inc., a Delaware corporation, was incorporated and, on July 10, 2017, the shareholders of Replimune Limited effected a share-for-share exchange pursuant to which they exchanged their outstanding shares in Replimune Limited for shares in Replimune Group, Inc., on a one-for-one basis.

In addition, the holders of warrants to purchase shares of series seed preferred stock and stock options to acquire Replimune Limited capital stock canceled their warrants and stock options in Replimune Limited and were issued replacement warrants and stock options to acquire Replimune Group, Inc. capital stock on a one-for-one basis. We refer to these transactions collectively as the reorganization. Upon completion of the reorganization, the historical consolidated financial statements of Replimune Limited became the historical consolidated financial statements of Replimune Group, Inc. because the reorganization was accounted for similar to a reorganization of entities under common control due to the high degree of common ownership of Replimune Limited and Replimune Group, Inc. and lack of economic substance to the transaction. We concluded that the reorganization resulted in no change in the material rights and preferences of each respective class of equity interests and no change in the fair value of each respective class of equity interests before and after the reorganization. On December 8, 2017, Replimune Limited transferred all outstanding shares of its wholly owned subsidiary, Replimune, Inc., to Replimune Group, Inc., a Delaware corporation. Replimune Group, Inc. is the sole shareholder of Replimune Limited, Replimune, Inc. and Replimune Securities Corporation, a Massachusetts corporation that was incorporated in November 2017.

Except as otherwise indicated or the context otherwise requires, all information in this prospectus is presented giving effect to the reorganization.

Financial overview

Since our inception, we have devoted substantially all of our resources to developing our Immulytic platform and our lead product candidate, RP1, building our intellectual property portfolio, conducting research and development of our product candidates, business planning, raising capital and providing general and administrative support for our operations. To date, we have financed our operations primarily with proceeds from the sale of convertible preferred stock or preferred stock. Through March 31, 2018, we had received gross proceeds of $86.9 million from our sales of preferred stock. We do not have any products approved for sale and have not generated any revenue from product sales.

Since our inception, we have incurred significant operating losses. Our ability to generate product revenue sufficient to achieve profitability will depend on the successful development and eventual commercialization of one or more of our product candidates. Our net losses were $7.7 million for the year ended March 31, 2017 and $19.7 million for the year ended March 31, 2018. As of March 31, 2018, we had an accumulated deficit of $28.9 million. These losses have resulted primarily from costs incurred in connection with research and development activities and general and administrative costs associated with our operations. We expect to continue to incur significant expenses and increasing operating losses for at least the next several years.

We anticipate that our expenses and capital requirements will increase substantially in connection with our ongoing activities, particularly as we advance the preclinical activities and clinical trials of our product candidates. In addition, we expect to incur additional costs associated with operating as a public company following the completion of this offering. We expect that our expenses and capital requirements will increase substantially if and as we:

- conduct our current and future clinical trials with RP1;
- progress the preclinical and clinical development of RP2 and RP3;
- establish, equip, and operate our own in-house manufacturing facility;

- seek to identify and develop additional product candidates;
- seek marketing approvals for any of our product candidates that successfully complete clinical trials, if any;
- establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval;
- maintain, expand and protect our intellectual property portfolio;
- acquire or in-license other drugs and technologies;
- hire and retain additional clinical, quality control, scientific and finance personnel; and
- add operational, financial and management information systems and personnel, including personnel to support our research and development programs, any future commercialization efforts and our transition to operating as a public company following the completion of this offering.

We will not generate revenue from product sales unless and until we successfully complete clinical development and obtain regulatory approval for RP1 or our other product candidates. If we obtain regulatory approval for any of our product candidates and do not enter into a commercialization partnership, we expect to incur significant expenses related to developing our internal commercialization capability to support product sales, marketing, and distribution. Further, upon the completion of this offering, we expect to incur additional costs associated with operating as a public company.

As a result, we will need substantial additional funding to support our continuing operations and pursue our growth strategy. Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of equity offerings, debt financings, collaborations, strategic alliances, and marketing, distribution, or licensing arrangements. We may be unable to raise additional funds or enter into such other agreements or arrangements when needed on favorable terms, or at all. If we fail to raise capital or enter into such agreements as, and when, needed, we may have to significantly delay, scale back, or discontinue the development and commercialization of one or more of our product candidates.

Because of the numerous risks and uncertainties associated with pharmaceutical product development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to achieve or maintain profitability. Even if we are able to generate product sales, we may not become profitable. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be unable to continue our operations at planned levels and be forced to reduce or terminate our operations.

As of March 31, 2018, we had cash and cash equivalents and short-term investments of $61.6 million. We believe that the expected net proceeds from this offering, together with our existing cash and cash equivalents and short-term investments will enable us to fund our operating expenses and capital expenditure requirements into the second half of 2021. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. See "—Liquidity and capital resources" and "Risk factors—Risks related to our financial position and need for additional capital."

Components of our results of operations

Revenue

To date, we have not generated any revenue from product sales as we do not have any approved products and do not expect to generate any revenue from the sale of products in the near future. If our development efforts for RP1 or any other product candidates that we may develop in the future are successful and result in regulatory approval, or if we enter into collaboration or license agreements with third parties, we may generate revenue in the future from a combination of product sales or payments from those collaboration or license agreements.

Operating expenses

Our expenses since inception have consisted solely of research and development costs and general and administrative costs.

Research and development expenses

Research and development expenses consist primarily of costs incurred for our research activities, including our discovery efforts and the development of RP1 and our other product candidates, and include:

- expenses incurred under agreements with third parties, including CROs that conduct research, preclinical activities and clinical trials on our behalf as well as CMOs that manufacture our product candidates for use in our preclinical and clinical trials;
- salaries, benefits and other related costs, including stock-based compensation expense, for personnel engaged in research and development functions;
- costs of outside consultants, including their fees, stock-based compensation and related travel expenses;
- the costs of laboratory supplies and acquiring, developing and manufacturing preclinical study and clinical trial materials;
- costs related to compliance with regulatory requirements in connection with the development of RP1 and our other product candidates; and
- facility-related expenses, which include direct depreciation costs and allocated expenses for rent and maintenance of facilities and other operating costs.

We expense research and development costs as incurred. We recognize external development costs based on an evaluation of the progress to completion of specific tasks using information provided to us by our service providers. Payments for these activities are based on the terms of the individual agreements, which may differ from the pattern of costs incurred, and are reflected in our consolidated financial statements as prepaid or accrued research and development expenses.

Our direct external research and development expenses are tracked on a program-by-program basis and consist of costs, such as fees paid to consultants, contractors, CMOs, and CROs in connection with our preclinical and clinical development activities. To date, we have not allocated expenses to our earlier-stage programs for RP2 and RP3. In addition, we do not allocate employee costs, costs associated with our discovery efforts, laboratory supplies, and facilities, including depreciation or other indirect costs, to specific product development programs because these costs are deployed across multiple product development programs and, as such, are not separately classified.

The table below summarizes our research and development expenses by product candidate or development program for each of the periods presented:

	Year ended March 31,	
	2017	2018
	(Amounts in thousands)	
RP1	$ 3,874	$ 7,250
Unallocated research and development expenses	3,062	6,266
Total research and development expenses	$ 6,936	$ 13,516

Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect that our research and development expenses will continue to increase for the foreseeable future as we initiate additional clinical trials of RP1, complete preclinical development and pursue initial stages of clinical development of RP2 and RP3 and continue to discover and develop additional product candidates. The successful development and commercialization of our product candidates is highly uncertain. This is due to the numerous risks and uncertainties associated with product development and commercialization, including the following:

- the scope, rate of progress, expense and results of our ongoing clinical trials of RP1, as well as of any future clinical trials of RP2 and RP3 or other product candidates and other research and development activities that we may conduct;
- the number and scope of preclinical and clinical programs we decide to pursue;
- our ability to maintain our current research and development programs and to establish new ones;
- uncertainties in clinical trial design and patient enrollment rates;
- the successful completion of clinical trials with safety, tolerability, and efficacy profiles that are satisfactory to the FDA or any comparable foreign regulatory authority;
- the receipt of regulatory approvals from applicable regulatory authorities;
- our success in establishing, equipping, and operating a manufacturing facility, or securing manufacturing supply through relationships with third parties;
- our ability to obtain and maintain patents, trade secret protection, and regulatory exclusivity, both in the United States and internationally;
- our ability to protect our rights in our intellectual property portfolio;
- the commercialization of our product candidates, if and when approved;
- the acceptance of our product candidates, if approved, by patients, the medical community, and third-party payors;
- our ability to successfully develop our product candidates for use in combination with third-party products or product candidates;

- negative developments in the field of immuno-oncology;
- competition with other products; and
- significant and changing government regulation and regulatory guidance.

A change in the outcome of any of these variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate. For example, if the FDA or another regulatory authority were to require us to conduct clinical trials beyond those that we anticipate will be required for the completion of clinical development of a product candidate, or if we experience significant trial delays due to patient enrollment or other reasons, we would be required to expend significant additional financial resources and time on the completion of clinical development. We may never succeed in obtaining regulatory approval for any of our product candidates.

We expect to use approximately $20.0 million of the proceeds from this offering to fund the development of RP1 through the completion of the ongoing Phase 1/2 clinical trial in four solid tumor types, approximately $15.0 million to fund our share of the costs to fully recruit our planned Phase 2 clinical trial with RP1 in CSCC, approximately $20.0 million to fund the completion of the preclinical development and the initial clinical trials of RP2 in approximately 100 patients, approximately $10.0 million to fund the completion of preclinical development and a Phase 1 clinical trial of RP3, and approximately $20.0 million to fund capital expenditures associated with establishing and equipping our planned manufacturing facility in Framingham, Massachusetts. However, because the design and outcome of planned and anticipated clinical trials is highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the development and commercialization of RP1 or our other product candidates.

General and administrative expenses

General and administrative expenses consist primarily of salaries and other related costs, including stock-based compensation, for personnel in our executive, finance, corporate and business development and administrative functions. General and administrative expenses also include professional fees for legal, patent, accounting, auditing, tax and consulting services; travel expenses; and facility-related expenses, which include direct depreciation costs and allocated expenses for rent and maintenance of facilities and other operating costs.

We expect that our general and administrative expenses will increase in the future as we increase our general and administrative headcount to support our continued research and development and potential commercialization of our product candidates. We also expect to incur increased expenses associated with being a public company following the completion of this offering, including costs of accounting, audit, legal, regulatory and tax-related services associated with maintaining compliance with exchange listing and SEC requirements; director and officer insurance costs; and investor and public relations costs.

Other income (expense), net

Research and development incentives

Research and development incentives consists of reimbursements of research and development expenditures. We participate, through our subsidiary in the United Kingdom, in the research and development program provided by the United Kingdom tax relief program, such that a percentage of up to 14.5% of our qualifying research and development expenditures are reimbursed by the United Kingdom government, and such incentives are reflected as other income.

Change in fair value of warrant liability

In connection with the issuance of the series seed preferred stock we issued to the series seed preferred stock holders warrants to purchase shares of series seed preferred stock. We classify the warrants as a liability on our consolidated balance sheets. We remeasure the warrant liability to fair value at each reporting date and recognize changes in the fair value of the warrant liability as a component of other income (expense), net in our consolidated statements of operations. We will continue to recognize changes in the fair value of the warrant liability until the warrants are exercised, expire or qualify for equity classification.

Upon the completion of this offering, the warrants to purchase shares of series seed preferred stock will become exercisable for shares of common stock instead of shares of preferred stock, and the warrant liability will be reclassified to additional paid-in capital. As a result, following the completion of this offering, we will no longer recognize changes in the fair value of the warrant liability as other income (expense), net in our consolidated statements of operations.

Interest income

Interest income consists of income earned on our cash and cash equivalents and short-term investments. Our interest income has not been significant due to low investment balances and low interest earned on those balances.

Other income (expense), net

Other income (expense), net consists primarily of realized and unrealized foreign currency transaction gains and losses.

Income taxes

Since our inception and through March 31, 2018, we have not recorded any income tax benefits for the net losses we incurred in each jurisdiction in which we operate, as we believe, based upon the weight of available evidence, that it is more likely than not that all of our net operating loss carryforwards will not be realized.

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act, or the Tax Act. The Tax Act includes a number of changes to existing tax law, including, among other things, a permanent reduction in the federal corporate income tax rate from a top marginal rate of 35% to a flat rate of 21%, effective as of January 1, 2018, as well as limitation of the deduction for net operating losses to 80% of annual taxable income and elimination of net operating loss carrybacks, in each case, for losses arising in taxable years beginning after December 31, 2017 (though any such net operating losses may be carried forward indefinitely). Under the Tax Act, our deferred tax assets and liabilities (before valuation allowance) were remeasured at the lower federal tax rate, resulting in an increase to our income tax provision with an equal and offsetting reduction in our valuation allowance. All of our recorded income tax benefits and provisions related to the Tax Act are provisional.

Results of operations

Comparison of the years ended March 31, 2017 and 2018

The following table summarizes our results of operations for the years ended March 31, 2017 and 2018:

	Year ended March 31,		
	2017	2018	Change
	(Amounts in thousands)		
Operating expenses:			
Research and development	$ 6,936	$ 13,516	$ 6,580
General and administrative	2,711	5,713	3,002
Total operating expenses	9,647	19,229	9,582
Loss from operations	(9,647)	(19,229)	(9,582)
Other income (expense):			
Research and development incentives	1,442	2,267	825
Interest income	25	288	263
Change in fair value of warrant liability	(150)	(972)	(822)
Other income (expense), net	626	(2,056)	(2,682)
Total other income (expense), net	1,943	(473)	(2,416)
Net loss	$ (7,704)	$ (19,702)	$ (11,998)

Research and development expenses

	Year ended March 31,		
	2017	2018	Change
	(Amounts in thousands)		
Direct research and development expenses by program:			
RP1	$ 3,874	$ 7,250	$ 3,376
Unallocated research and development expenses:			
Personnel related (including stock-based compensation)	2,121	4,120	1,999
Other	941	2,146	1,205
Total research and development expenses	$ 6,936	$ 13,516	$ 6,580

Research and development expenses for the year ended March 31, 2017 were $6.9 million, compared to $13.5 million for the year ended March 31, 2018. The increase of $6.6 million was due primarily to an increase of approximately $3.4 million in direct research costs associated with RP1 and an approximately $3.2 million increase in our unallocated research and development costs. The increase in RP1 costs was due primarily to an increase in clinical trial costs in the year ended March 31, 2018 associated with our ongoing Phase 1/2 clinical trial, which commenced in the United Kingdom in October 2017.

The increase in unallocated research and development expenses reflected an increase of $2.0 million in personnel-related costs, including stock-based compensation, and an increase of $1.2 million in other costs. The increase in personnel-related costs was primarily due to the hiring of additional personnel in our research and development functions as we began work on our planned Phase 2 clinical trial of RP1 in patients with CSCC. Personnel-related costs for each of the years ended March 31, 2017 and 2018 included

stock-based compensation expense of $0.2 million and $0.8 million, respectively. Other costs increased primarily due to purchases of supplies used across all of our product candidates.

General and administrative expenses

General and administrative expenses were $2.7 million for the year ended March 31, 2017, compared to $5.7 million for the year ended March 31, 2018. The increase of $3.0 million primarily reflected increases of $1.1 million in personnel related costs and $1.6 million in professional fees. The increase in personnel related costs was due to the hiring of additional personnel in our general and administrative functions as we expanded our operations in the United States.

Other income (expense), net

Other income (expense) was $1.9 million for the year ended March 31, 2017, compared to $(0.5) million for the year ended March 31, 2018. The decrease of $2.4 million was primarily attributable to a $2.7 million increase in the expense due to a change in foreign exchange rates and a $0.8 million increase in the expense due to a change in the fair value of the warrant liability, partially offset by a $0.8 million increase in expenditure reimbursements recognized under the research and development program provided by the United Kingdom government and a $0.3 million increase in interest income.

Liquidity and capital resources

Since our inception, we have not generated any revenue from product sales and have incurred significant operating losses and negative cash flows from our operations. We have not yet commercialized any of our product candidates, which are in various phases of preclinical and clinical development, and we do not expect to generate revenue from sales of any products for the foreseeable future, if at all.

Sources of liquidity

To date, we have financed our operations primarily with proceeds from the sale of convertible preferred stock. Through March 31, 2018, we had received gross proceeds of $86.9 million from our sales of preferred stock. As of March 31, 2018, we had cash and cash equivalents and short-term investments of $61.6 million.

Cash flows

The following table summarizes our cash flows for each of the periods presented:

	Year ended March 31,	
	2017	**2018**
	(Amounts in thousands)	
Net cash used in operating activities	$ (7,077)	$ (16,014)
Net cash used in investing activities	(238)	(44,046)
Net cash provided by financing activities	15,000	54,752
Effect of exchange rate changes on cash and cash equivalents	(1,419)	2,297
Net increase (decrease) in cash and cash equivalents	$ 6,266	$ (3,011)

Operating activities

During the year ended March 31, 2018, net cash used in operating activities was $16.0 million, primarily resulting from our net loss of $19.7 million, partially offset by net cash provided by changes in our operating assets and liabilities of $1.9 million and non-cash charges of $1.8 million. Net cash provided by

changes in our operating assets and liabilities for the year ended March 31, 2018 consisted primarily of a $1.6 million increase in accounts payable and a $1.4 million increase in accrued expenses and other current liabilities, partially offset by a $0.8 million increase in the research and development incentives receivable from the United Kingdom government due to the timing and amount of our qualifying expenditures and a $0.3 million increase in prepaid expenses and other current assets due to CRO deposits related to the ongoing Phase 1/2 clinical trial for RP1.

During the year ended March 31, 2017, net cash used in operating activities was $7.1 million, primarily resulting from our net loss of $7.7 million, partially offset by non-cash charges of $0.5 million, and net cash provided by changes in our operating assets and liabilities of $0.1 million. Net cash used by changes in our operating assets and liabilities for the year ended March 31, 2017 consisted primarily of a $0.2 million increase in accounts payable and a $1.4 million increase in accrued expenses due to accrued RP1 clinical trial costs, accrued compensation costs and accrued audit fees, partially offset by a $1.2 million increase in the research and development incentives receivable from the United Kingdom government due to the timing and amount of our qualifying expenditures and a $0.3 million increase in prepaid expenses and other current assets due to value-added tax receivables and CMO deposits for RP1 clinical trial supplies.

Investing activities

During the year ended March 31, 2018, net cash used in investing activities was $44.0 million, consisting of $52.5 million in purchases of available for sale securities and $0.1 million in purchases of property, plant and equipment, partially offset by $8.6 million in proceeds from maturities of short-term investments.

During the year ended March 31, 2017, net cash used in investing activities was $0.2 million, consisting of purchases of property, plant and equipment.

We expect that purchases of property, plant and equipment will increase over the next several years resulting from our intended establishment of our own in-house manufacturing facility.

Financing activities

During the year ended March 31, 2018, net cash provided by financing activities was $54.8 million, primarily consisting of net proceeds from our issuance of series B convertible preferred stock, or series B preferred stock.

During the year ended March 31, 2017, net cash provided by financing activities was $15.0 million, primarily consisting of proceeds from our issuance of series A convertible preferred stock, or series A preferred stock.

Funding requirements

Our plan of operation is to continue implementing our business strategy, continue research and development of RP1 and our other product candidates and continue to expand our research pipeline and our internal research and development capabilities. We expect our expenses to increase substantially in connection with our ongoing activities, particularly as we advance the preclinical activities and clinical trials of our product candidates. In addition, we expect to incur additional costs associated with operating as a public company following the completion of this offering. We expect that our expenses will increase substantially if and as we:

- conduct our current and future clinical trials of RP1;
- progress the preclinical and clinical development of RP2 and RP3;
- establish, equip, and operate our own in-house manufacturing facility;

- seek to identify and develop additional product candidates;
- seek marketing approvals for any of our product candidates that successfully complete clinical trials, if any;
- establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval;
- until our planned manufacturing facility is operational, require the manufacture by third parties of larger quantities of our product candidates for clinical development and potentially commercialization;
- maintain, expand and protect our intellectual property portfolio;
- acquire or in-license other drugs and technologies; and
- add operational, financial and management information systems and personnel, including personnel to support our research and development programs, any future commercialization efforts and our transition to operating as a public company following the completion of this offering.

As of March 31, 2018, we had cash and cash equivalents and short-term investments of $61.6 million. We believe that the anticipated net proceeds from this offering, together with our existing cash and cash equivalents and short-term investments, will enable us to fund our operating expenses and capital expenditure requirements into the second half of 2021. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect.

Because of the numerous risks and uncertainties associated with the development of RP1 and other product candidates and programs, and because the extent to which we may enter into collaborations with third parties for development of our product candidates is unknown, we are unable to estimate the timing and amounts of increased capital outlays and operating expenses associated with completing the research and development of our product candidates. Our future capital requirements will depend on many factors, including those described in this section and above under "—Operating expenses—Research and development expenses."

In addition, we intend to establish, equip, and operate an in-house manufacturing facility to manufacture RP1 and our other product candidates. We expect that such a facility would require capital expenditures of approximately $20.0 million to commence operations.

Developing novel biopharmaceutical products, including conducting preclinical studies and clinical trials, is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain marketing approval for any product candidates or generate revenue from the sale of any products for which we may obtain marketing approval. In addition, our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of therapies that we do not expect to be commercially available for many years, if ever. Accordingly, we will need to obtain substantial additional funds to achieve our business objectives.

Adequate additional funds may not be available to us on acceptable terms, or at all. We do not currently have any committed external source of funds. To the extent that we raise additional capital through the sale of our equity or convertible debt securities, your ownership interest may be diluted, and the terms of these securities may include liquidation or other preferences and anti-dilution protections that could adversely affect your rights as a common stockholder. Additional debt or preferred equity financing, if available, may involve agreements that include restrictive covenants that may limit our ability to take specific actions, such as incurring debt, making capital expenditures or declaring dividends, which could

adversely impact our ability to conduct our business, and may require the issuance of warrants, which could potentially dilute your ownership interest.

If we raise additional funds through collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technology, future revenue streams, research programs, or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings or collaborations, strategic alliances or licensing arrangements with third parties when needed, we may be required to delay, limit, reduce and/or terminate our product development programs or any future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Contractual obligations and commitments

The following table summarizes our contractual obligations as of March 31, 2018 and the effects that such obligations are expected to have on our liquidity and cash flows in future periods:

	Payments due by period				
	Total	Less than 1 year	1 to 3 years	4 to 5 years	More than 5 years
	(Amounts in thousands)				
Manufacturing commitments[1]	$ 2,938	$ 2,938	$ —	$ —	$ —
Operating lease commitments[2][3]	1,421	474	947	—	—
Total	$ 4,359	$ 3,412	$ 947	$ —	$ —

(1) Amounts in the table reflect commitments for costs associated with our external CMO, which we engaged to manufacture clinical trial materials.

(2) Amounts in the table reflect minimum payments due under our two leases of laboratory and office space in Woburn, Massachusetts and Oxfordshire, United Kingdom, at a monthly commitment of $7 and $31, respectively. These leases are both operating leases. Our lease in Woburn expires in March 2021, and our lease in Oxfordshire expires in April 2026 and is terminable by us in April 2021.

(3) In June 2018, we entered into an agreement to lease approximately 63,000 square feet of office, manufacturing and laboratory space within a previously occupied building with approximately 106,000 square feet of rentable space in Framingham, Massachusetts. Pursuant to the lease agreement, the lease term is estimated to commence in November 2018, subject to the landlord completing certain agreed upon landlord improvements. The rent commencement date is estimated to be eight months after the commencement of the lease term. The initial lease term is ten years from the rent commencement date and includes two optional five year extensions. As a result of the new lease agreement, our contractual obligations will increase by the following amounts over the initial ten year lease term (which are not reflected in the table above):

	Payments due by period				
	Total	Less than 1 year	1 to 3 years	4 to 5 years	More than 5 years
	(in thousands)				
Operating lease commitments	27,205	—	6,496	5,213	15,496

We enter into contracts in the normal course of business with CROs, CMOs and other third parties for clinical trials and preclinical research studies and testing. Manufacturing and research commitments in the preceding table include agreements that are enforceable and legally binding on us and that specify all significant terms, including fixed or minimum quantities to be purchased; fixed, minimum or variable price provisions; and the approximate timing of the transaction. For obligations with cancellation provisions, the amounts included in the preceding table are limited to the non-cancelable portion of the agreement terms or the minimum cancellation fee.

Collaborations

BMS

On February 26, 2018, we entered into a Clinical Trial Collaboration and Supply Agreement with Bristol- Myers Squibb Company, or BMS. Pursuant to the agreement, BMS will provide to us, at no cost, nivolumab, its anti-PD-1 therapy, for use in combination with RP1 in our ongoing Phase 1/2 clinical trial. Under the agreement, we will sponsor, fund and conduct the clinical trial in accordance with an agreed-upon protocol. Under the agreement, BMS granted us a non-exclusive, non-transferrable, royalty-free license (with a right to sublicense) under its intellectual property to use nivolumab in the clinical trial and has agreed to manufacture and supply nivolumab, at its cost and for no charge to us, for use in the clinical trial. Both parties will own and study data produced in the clinical trial, other than study data related solely to nivolumab, which will belong solely to BMS or study data related solely to RP1, which will belong solely to us.

Unless earlier terminated, the agreement will remain in effect until (i) the completion of the clinical trial, (ii) all related clinical trial data have been delivered to both parties and (iii) the completion of any statistical analyses and bioanalyses contemplated by the clinical trial protocol or any analysis otherwise agreed upon by the parties. The agreement may be terminated by either party (i) in the event of an uncured material breach by the other party, (ii) in the event the other party is insolvent or in bankruptcy proceedings or (iii) for safety reasons. Upon termination, the licenses granted to us to use nivolumab in the clinical trial will terminate. The agreement contains representations, warranties, undertakings and indemnities customary for a transaction of this nature.

Regeneron

On May 29, 2018, we entered into a Master Clinical Trial Collaboration and Supply Agreement with Regeneron Pharmaceuticals, Inc., or Regeneron. Pursuant to the agreement we agreed to undertake one or more clinical trials with Regeneron for the administration of our product candidates in combination with cemiplimab, an anti-PD-1 therapy being developed by Regeneron, across multiple solid tumor types, the first of which is intended to be our planned Phase 2 clinical trial of RP1 in patients with CSCC. Each clinical trial will be conducted pursuant to an agreed study plan which, among other things, will identify the name of the sponsor and which party will manage the particular study, and include the protocol, the budget and a schedule of clinical obligations. The first study plan related to the Phase 2 clinical trial in CSCC has been agreed.

Pursuant to the terms of the agreement, each party granted the other party a non-exclusive license of their respective intellectual property and agreed to contribute the necessary resources needed to fulfill their respective obligations, in each case, under the terms of agreed study plans. Development costs of a particular clinical trial will be split equally. The agreement contains representations, warranties, undertakings and indemnities customary for a transaction of this nature. The agreement also contains certain covenants that restrict us from entering into a third-party arrangement with respect to the use of our product candidates in combination with an anti-PD-1 therapy and that restrict Regeneron from entering into a third-party arrangement with respect to the use of cemiplimab in combination with an HSV-1 virus, in each case, for the treatment of a tumor type that is the subject of a clinical trial to which the covenants apply. Unless otherwise mutually agreed in a future study plan, these covenants are only applicable to our planned Phase 2 clinical trial in CSCC, and expire upon the one-year anniversary of the commencement of the applicable study plan.

The agreement may be terminated by either party if (i) there is no active study plan for which a final study report has not been completed, (ii) the parties have not entered into a study plan for an additional

clinical trial within a period of time after the delivery of the most recent final study report or (iii) in the event of a material breach.

Critical accounting policies and significant judgments and estimates

Our management's discussion and analysis of financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States. The preparation of our consolidated financial statements and related disclosures requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, costs and expenses and the disclosure of contingent assets and liabilities in our consolidated financial statements. We base our estimates on historical experience, known trends and events and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in greater detail in Note 2 to our consolidated financial statements appearing at the end of this prospectus, we believe that the following accounting policies are those most critical to the judgments and estimates used in the preparation of our consolidated financial statements.

Accrued research and development expenses

As part of the process of preparing our consolidated financial statements, we are required to estimate our accrued research and development expenses. This process involves reviewing open contracts and purchase orders, communicating with our personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual costs. The majority of our service providers invoice us in arrears for services performed, on a pre-determined schedule or when contractual milestones are met; however, some require advanced payments. We make estimates of our accrued expenses as of each balance sheet date in the consolidated financial statements based on facts and circumstances known to us at that time. Examples of estimated accrued research and development expenses include fees paid to:

- CROs in connection with performing research activities and conducting preclinical studies and clinical trials on our behalf;
- CMOs in connection with the production of preclinical and clinical trial materials;
- investigative sites or other service providers in connection with clinical trials;
- vendors in connection with preclinical and clinical development activities; and
- vendors related to product manufacturing and development and distribution of preclinical and clinical supplies.

We base our expenses related to preclinical studies and clinical trials on our estimates of the services received and efforts expended pursuant to quotes and contracts with multiple CMOs and CROs that supply, conduct and manage preclinical studies and clinical trials on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. There may be instances in which payments made to our vendors will exceed the level of services provided and result in a prepayment of the expense. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of

effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from the estimate, we adjust the accrual or the amount of prepaid expenses accordingly. Although we do not expect our estimates to be materially different from amounts actually incurred, our understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in reporting amounts that are too high or too low in any particular period. To date, there have not been any material adjustments to our prior estimates of accrued research and development expenses.

Stock-based compensation

We measure stock-based awards granted to employees and directors based on their fair value on the date of the grant and recognizes compensation expense for those awards over the requisite service period, which is generally the vesting period of the respective award. We have to date only issued stock-based awards with service-based vesting conditions and record the expense for these awards using the straight-line method. The fair value of each stock option grant is estimated on the date of grant using the Black-Scholes option-pricing model, which requires inputs based on certain subjective assumptions, including the expected stock price volatility, the expected term of the option, the risk-free interest rate for a period that approximates the expected term of the option, and our expected dividend yield. See Note 10 to our consolidated financial statements appearing at the end of this prospectus for more information. Forfeitures are accounted for as they occur. The fair value of each stock-based award is estimated on the date of grant based on the fair value of our common stock on that same date.

For stock-based awards granted to consultants and non-employees, we recognize compensation expense over the period during which services are rendered by such non-employees and consultants until completed. At the end of each financial reporting period prior to completion of the service, the fair value of these awards is remeasured using the then-current fair value of our common stock and updated assumption inputs in the Black-Scholes option pricing model.

We classify stock-based compensation expense in our consolidated statements of operations in the same manner in which the award recipient's payroll costs are classified or in which the award recipient's service payments are classified.

Determination of the fair value of common stock

The estimated fair value of the common stock underlying our stock options was initially determined at each grant date by our board of directors, with input from management. All options to purchase shares of our common stock are intended to be exercisable at a price per share not less than the per-share fair value of our common stock underlying those options on the date of grant.

In the absence of a public trading market for our common stock, on each grant date, our board of directors made a reasonable determination of the fair value of our common stock based on the information known to us on the date of grant, and upon a review of any recent events and their potential impact on the estimated fair value per share of the common stock. Our board of directors considered various objective and subjective factors to determine the fair value of our common stock as of each grant date, including:

- the prices at which we sold preferred stock and the superior rights and preferences of the preferred stock relative to our common stock at the time of each grant;
- the progress of our research and development programs, including the status of preclinical studies and planned clinical trials for our product candidates;
- our stage of development and our business strategy;

- external market conditions affecting the biotechnology industry, and trends within the biotechnology industry;
- our financial position, including cash on hand, and our historical and forecasted performance and operating results;
- the lack of an active public market for our common stock and our preferred stock;
- the likelihood of achieving a liquidation event, such as an initial public offering, or IPO, or a sale of our company in light of prevailing market conditions; and
- the analysis of IPOs and the market performance of similar companies in the biopharmaceutical industry.

We subsequently obtained third-party valuations of our common stock as of the dates on which our board of directors had granted equity awards. See "—Options granted." These third-party valuations of common stock were prepared using the hybrid method, which used market approaches to estimate our equity value. The hybrid method is a probability-weighted expected return method, or PWERM, where the equity value in one or more of the scenarios is allocated using an option-pricing method, or OPM. The PWERM is a scenario-based methodology that estimates the fair value of common stock based upon an analysis of future values for the business, assuming various outcomes. The common stock value is based on the probability-weighted present value of expected future investment returns considering each of the possible outcomes available as well as the rights of each class of stock. The future value of the common stock under each outcome is discounted back to the valuation date at an appropriate risk-adjusted discount rate and probability weighted to arrive at an indication of value for the common stock. A discount for lack of marketability of the common stock is then applied to arrive at an indication of value for the common stock. The OPM treats common stock and preferred stock as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company's securities changes. Under this method, the common stock has value only if the funds available for distribution to stockholders exceeded the value of the preferred stock liquidation preferences at the time of the liquidation event, such as a strategic sale or a merger. These third-party valuations were performed at various dates, which resulted in valuations of our common stock of $1.26 per share as of March 10, 2016, $1.34 per share as of October 12, 2016, $1.63 per share as of March 10, 2017, $2.90 per share as of July 26, 2017 and $3.83 per share as of January 31, 2018.

The assumptions underlying these valuations represented our board of directors' best estimates at the time they were made, which involve inherent uncertainties and the application of the judgment of our board of directors. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our stock-based compensation expense could be materially different.

Once a public trading market for our common stock has been established in connection with the completion of this offering, it will no longer be necessary for our board of directors to estimate the fair value of our common stock in connection with our accounting for granted stock options and other such awards we may grant, as the fair value of our common stock will be determined based on the quoted market price of our common stock.

Options granted

The following table sets forth, by grant date, the number of shares subject to options granted from April 1, 2016 through July 9, 2018, the per share exercise price of the options, the fair value of common stock per share on each grant date, and the per share estimated fair value of the options:

Grant Date	Number of shares subject to options granted	Per share exercise price of options	Fair value per common stock on grant date[(1)]	Per share estimated fair value of options on grant date
April 1, 2016	129,309	$ 1.75	$ 1.26	$ 0.76
June 1, 2016	39,787	$ 1.75	$ 1.26	$ 0.76
October 3, 2016	38,792	$ 1.75	$ 1.26	$ 0.76
October 12, 2016	34,811	$ 1.75	$ 1.34	$ 0.82
November 7, 2016	5,967	$ 1.75	$ 1.34	$ 0.82
January 21, 2017	43,169	$ 1.75	$ 1.34	$ 0.76
January 25, 2017	25,861	$ 1.75	$ 1.34	$ 0.83
March 10, 2017	64,651	$ 1.75	$ 1.63	$ 1.07
July 26, 2017	1,205,543	$ 3.30	$ 2.90	$ 1.86
August 2, 2017	9,946	$ 3.30	$ 2.90	$ 1.86
August 4, 2017	7,788	$ 3.30	$ 2.90	$ 2.25[(2)]
September 1, 2017	149,202	$ 3.30	$ 2.90	$ 1.86
September 4, 2017	4,973	$ 3.30	$ 2.90	$ 1.86
September 12, 2017	19,893	$ 3.30	$ 2.90	$ 1.86
September 25, 2017	12,433	$ 3.30	$ 2.90	$ 1.86
October 1, 2017	29,840	$ 3.30	$ 2.90	$ 1.87
January 21, 2018	68,872	$ 3.83	$ 3.83	$ 2.38
January 31, 2018	24,865	$ 3.83	$ 3.83	$ 2.57
February 16, 2018	49,734	$ 3.83	$ 3.83	$ 2.58
February 26, 2018	4,973	$ 3.83	$ 3.83	$ 2.58
March 5, 2018	9,946	$ 3.83	$ 3.83	$ 2.58

(1) For options granted between April 1, 2016 and March 10, 2017, our board of directors initially determined that the fair value of our common stock was $1.75 per share as of each respective grant date. For options granted between July 26, 2017 and October 1, 2017, our board of directors initially determined that the fair value of our common stock was $3.30 per share as of each respective grant date. However, as described below, the fair value of our common stock at the date of these grants was adjusted in connection with retrospective fair value assessments for accounting purposes.

(2) For purposes of recording stock-based compensation for grants of options to a non-employee, we measure the fair value of the award on the service completion date (vesting date). At the end of each reporting period prior to completion of the services, we remeasure the value of any unvested portion of the award based on the then-current fair value of the award and adjust the expense accordingly. The amount in this column reflects only the grant-date fair value of the award to a non-employee.

In the course of preparing for this offering, in February 2018, we performed retrospective fair value assessments for accounting purposes. We applied the fair values of our common stock from our retrospective fair value assessments to determine the fair value of these awards and calculate stock-based compensation expense for accounting purposes. These reassessed values were based, in part, upon third-party valuations of our common stock prepared as of each grant date on a retrospective basis. The third-party valuations were prepared using the hybrid method and used market approaches to determine our enterprise value.

Emerging growth company status

As an "emerging growth company," the JOBS Act permits us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies until those standards would otherwise apply to private companies. We have irrevocably elected to "opt out" of this provision and, as a result, we will comply with new or revised accounting standards when they are required to be adopted by public companies that are not emerging growth companies.

Internal control over financial reporting

During the audit of our consolidated financial statements as of and for the years ended March 31, 2017 and 2018, we identified material weaknesses in our internal control over financial reporting. A company's internal control over financial reporting is a process designed by, or under the supervision of, a company's principal executive and principal financial officers, or persons performing similar functions, and effected by a company's board of directors, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with generally accepted accounting principles. Under standards established by the Public Company Accounting Oversight Board, a material weakness is a deficiency or combination of deficiencies in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected and corrected on a timely basis. The material weaknesses that we identified were as follows:

- We did not design or maintain an effective control environment commensurate with our financial reporting requirements. We lacked a sufficient number of professionals with an appropriate level of accounting knowledge, training and experience to appropriately analyze, record and disclose accounting matters timely and accurately. Additionally, the limited personnel resulted in our inability to consistently establish appropriate authorities and responsibilities in pursuit of our financial reporting objectives, as demonstrated by, among other things, our insufficient segregation of duties in our accounting function. This material weakness further contributed to the material weakness below.

- We did not design and maintain formal accounting policies, processes and controls to analyze, account for and disclose complex transactions, including accounting for preferred stock, stock-based compensation, warrant liabilities and leases.

These material weaknesses also resulted in adjustments to preferred stock, stock compensation expense, warrant liability and deferred rent in our consolidated financial statements as of and for the year ended March 31, 2017, which were recorded prior to their issuance.

We are in the process of implementing measures designed to improve our internal control over financial reporting and remediate the control deficiencies that led to the material weaknesses, including hiring additional finance and accounting personnel and initiating design and implementation of our financial control environment, including the establishment of formal accounting policies and procedures, financial reporting controls and controls to account for and disclose complex transactions.

We, and our independent registered public accounting firm, were not required to perform an evaluation of our internal control over financial reporting in accordance with the provisions of the Sarbanes-Oxley Act. Accordingly, we cannot assure you that we have identified all, or that we will not in the future have additional, material weaknesses. Material weaknesses may still exist when we report on the effectiveness of our internal control over financial reporting as required by reporting requirements under Section 404 after the completion of this offering. See "Risk factors—We have identified material weaknesses in our internal

control over financial reporting. If we are unable to remediate these material weaknesses, or if we identify additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls, we may not be able to accurately or timely report our financial condition or results of operations, which may adversely affect our business."

Off-balance sheet arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

Recently issued accounting pronouncements

A description of recently issued accounting pronouncements that may potentially impact our financial position and results of operations is disclosed in Note 2 to our consolidated financial statements appearing at the end of this prospectus.

Quantitative and qualitative disclosures about market risks

Interest rate sensitivity

As of March 31, 2018, we had cash and cash equivalents and short-term investments of $61.6 million, which consisted of cash, commercial paper and commercial debt securities. Interest income is sensitive to changes in the general level of interest rates; however, due to the nature of these investments, an immediate 10% change in interest rates would not have a material effect on the fair market value of our investment portfolio.

As of March 31, 2018, we had no debt outstanding and are therefore not subject to interest rate risk related to debt.

Foreign currency exchange risk

Our headquarters are located in the United States, where the majority of our general and administrative expenses are incurred in U.S. dollars. The majority of our research and development costs are incurred by our subsidiary in Oxfordshire, United Kingdom, whose functional currency is the British Pound. We are exposed to foreign exchange rate risk. During the years ended March 31, 2017 and 2018, we recognized foreign currency transaction gains (losses) of $0.6 million, and $(2.1) million, respectively. These gains (losses) are primarily related to unrealized and realized foreign currency gains and losses as a result of transactions entered into by our United Kingdom subsidiary in currencies other than the British Pound, primarily the Euro. These foreign currency transaction gains (losses) were recorded as a component of other income (expense), net in our consolidated statements of operations. We believe that a 10% change in the exchange rate between the British Pound and the Euro would not have a material impact on our financial position or results of operations.

As we continue to grow our business, our results of operations and cash flows will be subject to fluctuations due to changes in foreign currency exchange rates, which could adversely impact our results of operations. To date, we have not entered into any foreign currency hedging contracts to mitigate our exposure to foreign currency exchange risk.

Business

Overview

We are a clinical-stage biotechnology company committed to applying our leading expertise in the field of oncolytic immunotherapy to transform the lives of cancer patients. We use our proprietary Immulytic platform to design and develop product candidates that are intended to maximally activate the immune system against cancer.

We are currently conducting a Phase 1/2 clinical trial with our lead product candidate, RP1, in approximately 150 patients with a range of solid tumors. We have entered into a collaboration with Bristol-Myers Squibb Company, or BMS, under which it has granted us a non-exclusive, royalty-free license to, and is supplying at no cost, its anti-PD-1 therapy, nivolumab, for use in combination with RP1 in this clinical trial. BMS has no further development-related obligations under this collaboration. The first part of this clinical trial is underway in the United Kingdom and we intend to conduct the second part of the clinical trial, which will enroll patients with four solid tumor types, in both the United Kingdom and, pending the opening of an Investigational New Drug Application, or IND, in the United States. We have also entered into a collaboration agreement with Regeneron Pharmaceuticals, Inc., or Regeneron, under which we intend to conduct clinical development of our product candidates in combination with cemiplimab, an anti-PD-1 therapy being developed by Regeneron. For each clinical trial conducted under this collaboration, Regeneron will fund one-half of the clinical trial costs, supply cemiplimab at no cost, and grant us a non-exclusive, royalty-free license to cemiplimab for use in the clinical trial. The first planned clinical trial to be conducted under this collaboration is a randomized controlled Phase 2 clinical trial of RP1 in combination with cemiplimab, versus cemiplimab alone, in approximately 240 patients with cutaneous squamous cell carcinoma, or CSCC, which we intend to initiate in the first half of 2019. If compelling clinical data are generated demonstrating the benefits of the combined treatment, we believe the data from this trial could support a filing with regulatory authorities for marketing approval. We also intend to initiate a clinical trial with our second product candidate, RP2, in additional tumor types in the first half of 2019.

Oncolytic immunotherapy is an emerging class of cancer treatment that exploits the ability of certain viruses to selectively replicate in and directly kill tumors, as well as induce a potent, patient-specific, anti-tumor immune response. Such oncolytic, or "cancer killing," viruses have the potential to generate an immune response targeted to an individual patient's particular set of tumor antigens, including neo-antigens that are uniquely present in tumors. Our product candidates incorporate multiple mechanisms of action into a practical, "off-the-shelf" approach, that is intended to maximize the immune response against a patient's cancer and to offer significant advantages over personalized vaccine approaches. We believe that the bundling of multiple approaches for the treatment of cancer into single therapies will simplify the development path of our product candidates, while also improving patient outcomes at a lower cost to the healthcare system than the use of multiple different drugs.

The foundation of our Immulytic platform consists of a proprietary, engineered strain of herpes simplex virus 1, or HSV-1, that has been "armed" with a fusogenic therapeutic protein intended to substantially increase anti-tumor activity. Our platform enables us to incorporate various genes whose expression is intended to augment the inherent properties of HSV-1 to both directly destroy tumor cells and induce an anti-tumor immune response.

We believe our lead product candidate, RP1, will be effective at killing tumors and inducing immunogenic, or immune-stimulating, tumor cell death and that it will be highly synergistic with immune checkpoint blockade therapies. In our ongoing Phase 1/2 clinical trial of RP1, we are conducting the first part of the

trial in the United Kingdom to evaluate safety in approximately 30 patients with a range of solid tumor types both alone and in combination with nivolumab, an anti-PD-1 therapy. No serious adverse events have been reported to date that have been determined to be related to RP1. In the second part of the trial, we will test RP1 in combination with nivolumab in four different tumor types in cohorts of approximately 30 patients each. These tumor types are metastatic melanoma, metastatic bladder cancer, microsatellite instability high cancer, and non-melanoma skin cancer, all of which we have chosen because they demonstrate a level of responsiveness to single-agent anti-PD-1 therapy but for which significant unmet medical need remains. In the second part of the trial, we intend to continue to evaluate the safety and tolerability of RP1 in combination with nivolumab. This part of the clinical trial will also evaluate efficacy under the clinical trial protocol, primarily on the basis of the proportion of patients who have a response within each tumor type cohort. Responses are either defined as a partial response (a 30% or greater reduction in tumor size) or a complete response (a complete eradication of the disease). We then intend to analyze each cohort's data to determine the indications that merit progressing into further clinical development.

In addition, we are preparing to initiate in the first half of 2019 a randomized, controlled Phase 2 clinical trial of RP1 in combination with cemiplimab, versus cemiplimab alone, in approximately 240 patients with CSCC. If compelling clinical data are generated demonstrating the benefits of the combined treatment, we believe the data from this trial could support a filing with regulatory authorities for marketing approval.

We are also developing additional product candidates, including RP2 and RP3, built on our Immulytic platform, that are further engineered to enhance anti-tumor immune responses and to address additional tumor types. RP2 has been engineered to express an antibody-like molecule that blocks the activity of CTLA-4, a protein that inhibits the immune response to tumors. We are engineering RP3 with the intent not only to block the activity of CTLA-4, but also to further stimulate an anti-tumor response through activation of the immune co-stimulatory pathways. We intend to file INDs and foreign equivalents and, assuming regulatory clearance, expect that RP2 will enter clinical development in the first half of 2019, and that RP3 will enter clinical development in the first half of 2020.

Our product candidates are administered by direct injection into solid tumors. We believe that direct injection maximizes virus-mediated tumor cell death, provides the most efficient delivery of virus-encoded immune activating proteins into the tumor with the goal of activating systemic immunity, and limits the systemic toxicities that could be associated with intravenous administration. Activation of systemic immunity through local administration can lead to systemic clinical benefit through the induction of tumor responses in tumors which have not themselves been injected, which is known as an "abscopal" effect.

While products and product candidates based on the oncolytic immunotherapy approach have shown single-agent activity, we believe that our product candidates will demonstrate particular synergy in combination with immune checkpoint blockade therapies, including those that target the programmed cell death protein 1, or PD-1, a tumor cell surface receptor that plays an important role in inhibiting, or shutting down, immune responses, or the receptor or ligand for PD-1, called PD-L1. A pre-existing anti-tumor immune response and the presence of T cells within tumors are key predictors of the effective treatment of cancer with immune checkpoint blockade therapies. Because most patients do not have an ongoing pre-existing anti-tumor immune response, only a minority of patients respond to treatment with immune checkpoint blockade therapies alone. We believe that oncolytic immunotherapy treatments can initiate or enhance an immune response in patients with no or minimal pre-existing anti-cancer immunity and thereby increase the effectiveness of immune checkpoint blockade therapies. We believe that this is strongly supported by the results of a randomized, controlled Phase 1/2 clinical trial conducted by Amgen in melanoma patients, in which the combination of T-Vec with ipilimumab anti-CTLA-4 immune checkpoint

blockade therapy gave a response rate (meaning the observed measurement of the reduction in tumor size per the protocol) of 38% compared to 18% for ipilimumab therapy alone. While these results provide promising evidence of the activity of an existing oncolytic immunotherapy used in combination with checkpoint blockade therapies, we are designing our product candidates with additional mechanisms of action compared with T-Vec and other oncolytic immunotherapies in development, with the goal of maximizing both direct tumor killing and the activation of the patient's immune system against their particular cancer. We believe these additional mechanisms of action of our product candidates will increase tumor susceptibility to immune checkpoint blockade therapies and, in particular, work synergistically with antibodies targeting PD-1 or PD-L1 to enhance response rates across a range of tumor types.

Our team and investors

Our founders and core management team, including Robert Coffin, Ph.D., our President and Chief Executive Officer, Philip Astley-Sparke, our Executive Chairman, and Colin Love, Ph.D., our Chief Operating Officer, were the founder and senior management team of BioVex, where they developed T-Vec, the only oncolytic immunotherapy to receive FDA approval. BioVex was acquired by Amgen in 2011. Our Chief Medical Officer, Howard Kaufman, M.D., was the principal investigator for the pivotal study upon which T-Vec was approved and previously served as President of the Society for the Immunotherapy of Cancer. We are backed by a group of leading institutional life science investors, including affiliates of Atlas Ventures, Bain Capital Life Sciences, BVF Partners, Cormorant Capital, Forbion Capital Partners, Foresite Capital, Omega Funds and Redmile Group.

Our strategy

Our goal is to create the leading oncolytic immunotherapy company that discovers, develops and commercializes next-generation products with multiple mechanisms of action for the treatment of a broad range of solid tumor types. Key elements of our strategy include the following:

Advance the development of, and seek regulatory approval for, our lead product candidate, RP1. We are advancing two clinical trials for RP1. In the first half of 2019, we are planning to commence a randomized, controlled Phase 2 clinical trial of RP1 in combination with cemiplimab, versus cemiplimab alone, in approximately 240 patients with CSCC. We are designing this trial to potentially support product registration. In addition, we are currently conducting a Phase 1/2 clinical trial of RP1 targeting four different tumor types in cohorts of approximately 30 patients each. We then intend to analyze each cohort's data to determine the indications that merit further clinical development.

Initiate the clinical development of and obtain regulatory approval for RP2, our next product candidate. We have engineered RP2, which is based on RP1 but additionally expresses an anti-CTLA-4 antibody-like protein, to target tumor types that do not respond to single-agent immune checkpoint blockade therapies and patients who have not responded to or who have progressed on anti-PD-1/L1 therapy. We plan to initiate a Phase 1/2 clinical trial in the first half of 2019 of RP2 in combination with anti-PD-1 therapy in triple negative breast cancer and two further indications.

Leverage our Immulytic platform to build a portfolio of product candidates that target a range of immune mechanisms and progress these product candidates into the clinic. We plan to utilize our Immulytic platform to develop additional products, including RP3, that express further combinations of proteins aimed at activating multiple immune mechanisms for the treatment of a broad range of solid tumor types. Our current goal in the coming years is to introduce one product candidate into the clinic each year.

Apply our extensive expertise to establish, equip, and operate our own in-house manufacturing facility. We intend to establish, equip, and operate our own manufacturing facility in Framingham, Massachusetts for multi-product cGMP manufacturing. We expect our facility to be ready to produce clinical-grade material during the first half of 2020 and ultimately to be able to support commercial product launch.

Retain significant economic and commercial rights to our product candidates in key geographic areas. We intend to retain rights in the United States for our product candidates and to develop an oncology-focused commercial organization. When economically attractive, we intend to evaluate and enter into development and marketing agreements with pharmaceutical and biotechnology partners for geographic areas in which we are unlikely to pursue development and commercialization on our own.

Immuno-oncology background and limitations of existing therapies

Cancer is a broad group of diseases in which normal cells are transformed into a state of rapid and uncontrolled cell division, typically forming tumors. Cancer originates from a particular tissue in the body, such as the lung or skin, and often spreads, or metastasizes, as the disease progresses. Tumors are comprised of multiple cell types, including cancerous cells and immune cells. The composition and the type of tumor dictate the aggressiveness of a particular cancer, its susceptibility to treatment, and ultimately the outcome for the patient. A promising new approach to cancer treatment, which is the subject of significant ongoing drug development activity, is to activate the immune system against cancer.

The immune system contains many different cells types that fall into two general categories, cells of the innate immune system and cells of the adaptive immune system. The innate immune system is a first-line, ubiquitous, non-specific defense mechanism aimed at combating elements that the body views as foreign, particularly microbial pathogens and parasites, but also tumor cells. After the innate immune system is activated, an adaptive immune response is triggered that is specific to particular proteins, known as antigens. The adaptive immune system is flexible and can evolve. Importantly, it has the capacity for immune memory, or the ability to be recalled into action if the same foreign antigen is detected in the body in the future. Activation of both the innate and adaptive components of the immune system is believed to be essential for the induction of an effective anti-cancer immune response.

Immune checkpoints are key mechanisms of the adaptive immune system that function to inhibit immune responses and, in particular, to prevent the induction of autoimmunity. In the cancer setting, tumors can hijack these immune checkpoints such that the tumors become protected from the effects of anti-cancer immunity. This enables tumors to continue growing without or with reduced immune interference, even if an anti-tumor immune response had been initiated. Additional immune checkpoints inhibit the initial induction of an immune response, rather than subsequently protecting the tumor from a previously established immune response.

Checkpoint inhibitor therapies block these negative regulators of the immune system with the intent of either rendering tumors susceptible to immune attack and/or increasing the potency of the anti-tumor immune response that is generated. This approach to cancer therapy has the potential to result in long-lasting anti-cancer effects in certain patients with certain tumor types. To date, six immune checkpoint blockade products have been approved in a number of cancer indications, and there are numerous other related drug candidates in preclinical and clinical development. Market researchers forecast that immuno-oncology treatments will grow to over $25 billion a year in sales globally by 2022.

While immune checkpoint blockade has been a transformational treatment for many patients with cancer, the majority of patients do not currently respond to treatment. This is because checkpoint blockade

therapies targeting PD-1, PD-L1 or CTLA-4 require a pre-existing immune response to a patient's tumor and that the tumors be "inflamed," or "hot." Because many patients do not have an ongoing pre-existing anti-tumor immune response, which is often referred to as a tumor being immunologically "cold," only a minority of patients respond to checkpoint blockade therapies alone. We therefore believe that the ability to effectively convert "cold" tumors to "hot" would substantially increase the response rates and the types of tumors which are susceptible to immune checkpoint blockade.

Our approach — Oncolytic immunotherapy

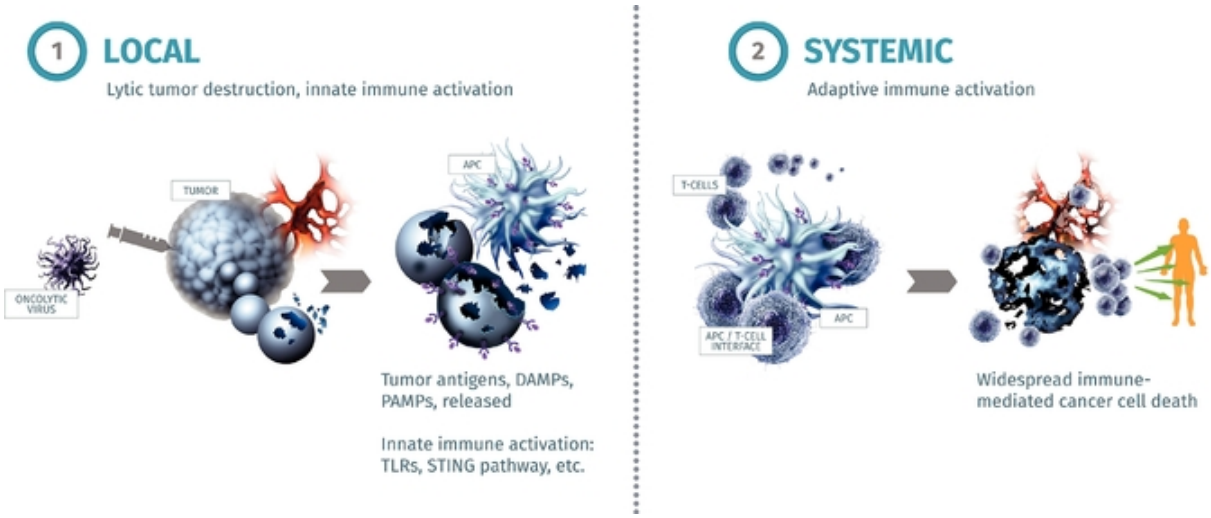
Our product candidates are designed to induce a robust immune response against a patient's cancer and turn immunologically "cold" tumors "hot." To achieve this objective, we use oncolytic immunotherapies that combine multiple mechanisms of action in a single product candidate. We believe our product candidates will initiate or enhance an immune response in patients with no or minimal pre-existing cancer immunity, including to tumor neo-antigens, and thereby increase the effectiveness of immune checkpoint blockade therapies.

Oncolytic immunotherapy is the treatment of cancer with viruses that selectively replicate in tumors, but not in normal tissue, thereby killing the virus-infected tumor cells. In addition to this direct oncolytic killing of cancer cells, the presence of the virus and the generation of immune-stimulating tumor cell death triggers both innate and adaptive immune responses that result in further tumor destruction, intended to result in the establishment of lasting antitumor immunity.

Our product candidates are intended to act at several key points in the pathways involved in the initiation of an immune response. Following direct injection into tumors, our viruses replicate in cancer cells and then lyse, or break them open, releasing tumor antigens, including neo-antigens specific to the patient, which could otherwise be hidden from the immune system. This process of necrotic cell death releases intra-cellular markers of "danger," the danger associated molecular patterns, or DAMPs, while the virus produces pathogen associated markers of danger, or PAMPs. These trigger various pathways of the innate immune system, including the STING pathway and pathways mediated through toll-like receptors, or TLRs, each resulting in the production of interferon. Innate immune activation would be expected to itself provide anti-tumor effects, as interferon activates natural killer cells which can destroy tumor cells. Innate immune activation also helps to trigger adaptive anti-cancer immunity, in which antigen presenting cells, or APCs, are attracted to the injected tumor. APCs internalize cancer antigens, including neo-antigens, and traffic back to the draining lymph nodes where they present the antigens to T cells. These are then primed to proliferate and disperse systemically to seek and destroy cancer cells with the same antigen profile throughout the body and destroy distant tumor deposits.

To further augment these intended effects, our oncolytic immunotherapies are intended to genetically encode and express multiple potent cell-killing and immune-stimulating proteins in the tumor—in other words, our oncolytic immunotherapies are "armed" with these therapeutic genes.

We believe our product candidates act at each of the key points needed to initiate a potent antitumor immune response, as shown in the diagram below.



We believe that our ability to incorporate multiple mechanisms of action into a practical, "off-the-shelf" approach to initiating or enhancing an anti-tumor immune response, including to neo-antigens, will offer significant advantages over the various approaches to immune activation that are currently in development, including personalized vaccine treatments. Tumor neo-antigens are uniquely present in tumors as compared to normal tissue because they result from the genetic changes that occur as cancer develops. Unlike the antigens present in normal tissue, the immune system sees neo-antigens as foreign. As a result, the immune system is able to mount an immune response to tumor neo-antigens in the same way that it would to the antigens contained in disease causing micro-organisms, which the immune system also sees as foreign. Researchers believe immune responses to tumor neo-antigens are particularly important in providing the patient's immune system the ability to combat cancer, and as a consequence various "personalized vaccine" approaches to generating immune responses to tumor neo-antigens are in development. These approaches are generally both expensive and time consuming because a vaccine cannot be designed and manufactured until a tumor biopsy is taken and analyzed in the laboratory to identify the mutated tumor antigens that will be targeted by the treatment. We believe that our approach may also offer significant advantages over other approaches to anti-cancer immune activation that only target a single pathway of the immune system, as is the case with most of the other immune-oncology therapies currently under development. Importantly, our product candidates are intended to act to maximally activate an immune response against cancer, the missing element needed to allow anti-PD-1 or anti-PD-L1 therapy to treat more patients and tumor types, unlike some other therapies such as those targeting indoleamine 2,3-dioxygenase, or IDO, which are intended to act by blocking additional defense mechanisms against an anti-tumor immune response once it has been initiated.

Our Immulytic platform

The foundation of our oncolytic immunotherapy product candidates, which we call our Immulytic platform, consists of a proprietary strain of HSV-1 that we have engineered to replicate selectively in tumors and to express a fusogenic glycoprotein, a protein that triggers the fusion of the membranes between cells. HSV-1 is both highly cell lytic and inflammatory, and also has a large carrying capacity, which makes it possible to incorporate multiple genes encoding therapeutic proteins. We believe our combination of HSV-1 with the

expression of the fusogenic glycoprotein increases the natural ability of HSV-1 to kill tumor cells and to induce an anti-tumor immune response. The fusogenic functionality of our product candidates is intended not only to increase the number of tumor cells that are killed, but also to cause highly immunogenic death of tumor cells. We believe that these factors will increase the potency of the systemic anti-tumor immune response that is generated by our product candidates. With the intention of amplifying the anti-tumor response further, we have also engineered our product candidates to express in tumors a range of additional, potent, immune activating genes encoding therapeutic proteins. Our lead product candidate, RP1, serves as the base for the development of these additional oncolytic immunotherapies expressing further therapeutic proteins. The development process and certain advantages of our Immulytic platform are summarized below:

Selecting the virus species and the virus strain

Although a number of viral species have been developed for oncolytic use, we believe HSV-1 is the most promising for the following reasons:

- HSV-1 can infect many different tumor cell types and, following infection, can destroy tumor cells through highly lytic virus replication;
- HSV-1 rarely produces severe illness in humans;
- The deletion of the genes encoding the HSV-1 ICP34.5 protein provides both tumor-selective virus replication and a well-characterized non-pathogenic phenotype;
- HSV-1 is a highly inflammatory virus, which we believe is beneficial for triggering both innate and adaptive immune responses;
- HSV-1 has a large genome, which has the packaging capacity to allow for the insertion of multiple genes expressing therapeutic proteins that are intended to enhance tumor cell killing and immune activation; and
- Effective anti-viral drugs are available for HSV-1, which could be used to block virus replication if needed.

In addition, HSV-1 has a proven track record in oncolytic immunotherapy, in particular with the approval by the FDA in 2015 of T-Vec for the treatment of unresectable advanced melanoma patients with injectable non-visceral tumors.

Different isolates, or "strains," of HSV-1 have differing properties, including with respect to the ability to infect and kill human tumor cells. Standard "laboratory" strains of HSV-1 may have reduced potency due to long-term culture in the laboratory or because such strains were not selected for the purposes of tumor killing. We believe that "clinical" strains, which are strains taken from individuals who suffer from cold sores, would not have become attenuated through long-term culture and, if selected on the basis of the ability to infect and kill human tumor cells, would provide higher potency than strains that have not been selected in this way.

Based on this rationale, we tested 29 clinical strains of HSV-1 isolated from 183 volunteers. Through this process we expected to sample a broad spectrum of the natural variation among clinical strains of HSV-1, including in relation to their ability to infect and kill human tumor cells. We observed a broad range of killing activity and chose the strain with the most promising overall properties for further development. Through this process we believe we have identified a highly potent strain of HSV-1 that provides a robust foundation for the development of our Immulytic platform.

To render the replication of the virus tumor-selective, we engineered this virus strain to delete the genes encoding the HSV-1 ICP34.5 and ICP47 proteins. This combination of deletions provides the virus with well-characterized non-pathogenic and tumor-selective properties.

To augment the underlying abilities of the virus both to kill tumor cells and to induce an anti-tumor immune response that may maximally activate the immune system against a patient's cancer, we have armed all of our product candidates with genes to express between two and four therapeutic proteins. These therapeutic proteins are expressed in the tumor as the virus replicates, and, as a result, may help to kill tumor cells and drive the initiation of an anti-tumor immune response in the tumor and draining lymph nodes. Once this anti-tumor immune response is initiated, the activated immune cells may also attack not only the injected tumors but also tumors that are distant from the injection sites.

Maximizing direct tumor killing — Expression of a fusogenic protein

To increase the natural ability of HSV-1 to directly kill tumors and to drive the immunogenicity of tumor cell death, we engineered our viruses to express a protein that causes cell-to-cell fusion intended to result in increased immune-stimulating cell death. Although there are various fusogenic proteins available for this purpose, we use the surface glycoprotein, or GP, from another virus, gibbon ape leukemia virus, or GALV, with a specific deletion of the R-peptide. The resulting protein is known as GALV-GP R(-). We believe that the higher levels of tumor antigens released through the expression of GALV-GP R(-), including tumor neo-antigens, combined with enhanced immunogenicity of cell death, increases both systemic immune-mediated anti-tumor effects and local, or injected, tumor destruction.

Enhancing the systemic anti-tumor immune response

With the aim of augmenting the potency of the anti-tumor immune response which is generated, we have also engineered our product candidates to express potent immune-stimulating proteins within tumors as replication occurs.

Expressing GM-CSF

RP1, our lead product candidate, expresses granulocyte-macrophage colony-stimulating factor, or GM-CSF, in addition to GALV-GP R(-). GM-CSF is a potent cytokine that activates and causes the proliferation of APCs and is, therefore, attractive for expression in the tumor to augment the anti-tumor immune response. Due to its ability to enhance immune responses, a number of other oncolytic immunotherapy products and product candidates in development have been designed to express GM-CSF. These include:

- T-Vec, approved in the United States, the European Union and elsewhere for the treatment of advanced melanoma;
- Pexa-Vec, in Phase 3 clinical development by SillaJen, Inc. for the treatment of hepatocellular carcinoma, or HCC; and
- CG0070, in development by Cold Genesys, Inc. for the treatment of bladder cancer.

Expressing additional immune-stimulating proteins

We have designed our further product candidates, RP2 and RP3, to express additional genes encoding therapeutic immune-stimulating proteins.

RP2 is a version of RP1 that includes a gene encoding an anti-CTLA-4 antibody-like protein. We believe that RP2 has the potential to offer advantages over current anti-CTLA-4 approaches, including ipilimumab, an anti-CTLA-4 therapy marketed by BMS. The FDA has approved ipilimumab for intravenous administration

for the treatment of advanced melanoma and has approved nivolumab, an anti-PD-1 therapy also marketed by BMS, for use in combination with ipilimumab, for advanced melanoma and renal cell carcinoma. Ipilimumab has also shown clinical synergy with GM-CSF. Intravenous administration of ipilimumab, however, causes significant toxicity, largely due to auto-immune side effects, particularly in combination with nivolumab. These autoimmune side effects from the systemic administration of ipilimumab appear to result from the blocking of the immune system's ability to recognize normal tissue and not attack it. Because the function of CTLA-4 is to inhibit the induction of immune responses, we believe that blockade of this effect should be needed only at the site where anti-tumor immune response induction occurs, namely at the tumor and the lymph nodes draining from the tumor site. We believe that RP2 will offer advantages compared with current CTLA-4 approaches, including ipilimumab. By expressing anti-CTLA-4 only locally in the tumor and draining lymph nodes, we believe that activity will be retained, but that toxicity will be reduced.

We are designing our RP3 product candidate to express not only GALV-GP R(-) and anti-CTLA-4, but also additional proteins that are intended to stimulate the potency of the anti-cancer T cell response through activation of the immune co-stimulatory pathways. We are studying the effects of incorporating the ligands for co-stimulatory proteins, including those known as CD40, OX40 and 4-1BB, for this purpose, and intend to finalize the version of RP3 that we will seek to progress into clinical development during the second half of 2018. We expect to introduce RP3 into clinical development in the first half of 2020. Currently, numerous antibodies are in clinical development by other companies that target these same pathways, but, as with CTLA-4, the site of action of these pathways is where the anti-tumor immune response is generated, so we believe that local intratumoral expression will be an advantageous approach.

We plan to develop product candidates beyond RP3 that will express additional genes encoding therapeutic proteins targeted at particular aspects of the anti-tumor immune response. As demonstrated by our planned development timelines, we believe that a particular advantage of our Immulytic platform is that it allows us to develop new product candidates containing genes encoding additional therapeutic proteins rapidly from conception through to the initiation of clinical trials. Our current goal in the coming years is to bring one product candidate into the clinic each year.

Synergy with immune checkpoint blockade therapies

While we believe our product candidates will be able to provide a clinical benefit as single agents, we believe their impact will be enhanced in combination with immune checkpoint blockade therapies. We currently intend for our product candidates to be used in combination with immune checkpoint blockade therapies, particularly antibodies targeting PD-1 or PD-L1. Based on a similar rationale and in support of this approach, a number of other oncolytic viruses have previously been tested in combination with immune checkpoint blockade therapies in clinical trials with promising results. In each of the completed single arm clinical trials, so far all in melanoma, a response rate that is higher than would be expected for the immune checkpoint blockade therapy alone has been observed, including a 62% response rate and 33% complete response rate having been seen with T-Vec combined with pembrolizumab. None of these clinical trials showed that oncolytic immunotherapy added significant additional toxicity relative to checkpoint blockade therapy alone.

There has been one randomized, controlled trial to date of an oncolytic immunotherapy combined with immune checkpoint blockade therapy. In that randomized Phase 2 clinical trial, T-Vec was tested in combination with ipilimumab compared to treatment with ipilimumab alone in 198 melanoma patients. The primary endpoint of the study was objective response rate. The combination of T-Vec and ipilimumab gave an objective response rate (meaning the observed measurement of the reduction in tumor size per the

protocol) of 38% compared to 18% with ipilimumab alone (p=.002), which was concluded to be statistically significant. No significant increase in toxicity was observed.

Later-stage clinical development is now underway with T-Vec in combination with pembrolizumab in the following clinical trials:

- A Phase 3 trial of T-Vec in combination with pembrolizumab, compared with pembrolizumab plus a placebo in patients with advanced melanoma; and

- A controlled Phase 2 trial of T-Vec in combination with pembrolizumab in patients with liver metastases from a variety of tumor types.

We believe that the early data, including randomized, controlled data described above, provides promising clinical support for oncolytic immunotherapy in combination with immune checkpoint blockade therapy.

Administration by direct injection into tumors

Our product candidates are injected directly into tumors. We can inject tumors close to the body's surface either visually or with simple ultrasound guidance, and can inject tumors found deeper in the body with imaging guidance techniques that are routinely used to take tumor biopsies. Direct injection is intended to maximize virus-mediated tumor cell death, which is required for the optimal activation of systemic immunity. In addition, we believe that direct injection provides the most efficient delivery of genes encoding therapeutic proteins into the tumor and thereby limits systemic exposure and related toxicities. We believe that only a limited number of injections of our product candidates will be required to initiate an immune response, particularly when combined with immune checkpoint blockade therapies such as those targeting PD-1 or PD-L1. By contrast, we believe that the systemic administration of oncolytic immunotherapy product candidates increases dilution in the blood, decreases tumor targeting, and increases the likelihood of an antiviral immune response, greatly reducing the ability of the virus to reach tumors.

Our product candidate pipeline

We are developing a pipeline of oncolytic immunotherapy product candidates that we believe have the potential to provide meaningful and long-lasting clinical benefits to cancer patients. The following table summarizes our current pipeline and expectations for development timelines:

Product candidate	Indication	Stage of development
RP1	Mixed advanced solid tumors	Phase 1 clinical trial of RP1 alone and in combination with nivolumab ongoing in the UK in approximately 30 patients (part of an approximately 150 patient Phase 1/2 clinical trial, with Phase 2 to initiate in H1 2019)
	Metastatic melanoma	To initiate four Phase 2 cohorts, approximately 30 patients per cohort, of the ongoing Phase 1/2 clinical trial testing RP1 in combination with nivolumab in H1 2019
	Metastatic bladder cancer	
	Microsatellite instability high cancer	
	Non-melanoma skin cancer	
	Cutaneous squamous cell carcinoma	To enter a Phase 2 controlled clinical trial testing RP1 in combination with cemiplimab vs cemiplimab alone in H1 2019, assuming the opening of an IND or foreign equivalent
RP2	Mixed advanced solid tumors	In preclinical development; to enter a Phase 1 clinical trial in H1 2019, assuming the opening of an IND or foreign equivalent
	Triple negative breast cancer[1]	To enter a Phase 2 clinical trial in H2 2019, assuming the opening of an IND or foreign equivalent
RP3	Anti-PD-1/L1 non-responsive tumors	In preclinical development; to enter a Phase 1 clinical trial in H1 2020, assuming the opening of an IND or foreign equivalent

(1) Two additional tumor types to be selected for Phase 2 clinical development, with clinical trials expected to commence in H2 2019, assuming in each case the opening of an IND or foreign equivalent.

We believe that our intended step-wise development approach from RP1 through RP3 reduces clinical risk, as we will be able to study the safety profile of each therapeutic protein prior to moving to the next product candidate with an additional therapeutic protein that is intended to provide more potent anti-tumor immune effects.

Lead product candidate: RP1

Our lead product candidate, RP1, is a selectively replicating version of HSV-1 that expresses GALV-GP R(-) and human GM-CSF. RP1 has the following properties:

- We have deleted the ICP34.5-encoding gene, which enables tumor-selective virus replication;
- We have deleted the ICP47-encoding gene, which is intended to prevent the inhibition of the antigen presentation pathway otherwise caused by ICP47 binding to the transporter associated with antigen presentation. ICP47 deletion is also intended to result in the increased and earlier expression of the HSV-1 US11 gene by placing the HSV-1 US11 gene under the control of ICP47 promoter. This increases virus replication in tumors without reducing tumor-selectivity; and

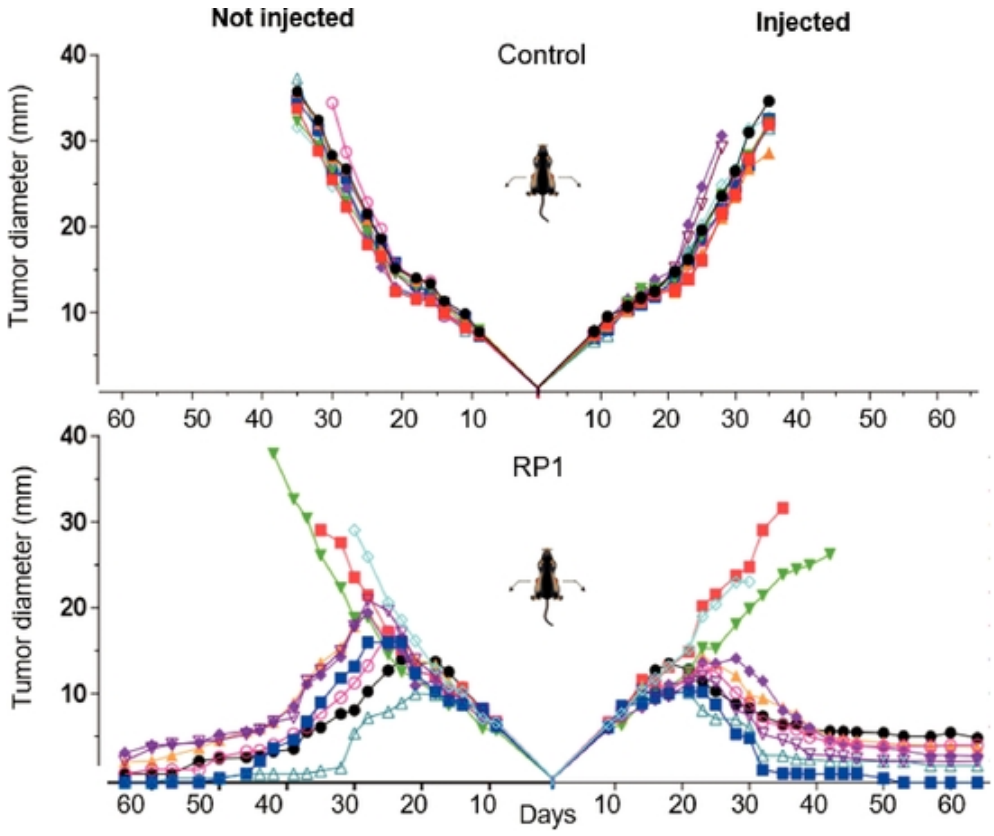
- We have inserted the sequences for GALV-GP R(-) and human GM-CSF, which results in the expression of these therapeutic proteins with the intention of increasing both the direct tumor cell killing and the potency of the anti-tumor immune response that is induced.

We are developing RP1 for use in combination with immune checkpoint blockade therapy, particularly therapies targeting PD-1 or PD-L1. We believe that the robust release of tumor antigens and the highly immunogenic tumor cell death intended to be caused by RP1 will further increase the synergy previously seen between oncolytic viruses and immune checkpoint blockade therapy.

Preclinical results

In one of our preclinical experiments, tumors were induced in both the left and right flanks of rats. RP1 was then injected into the tumors in only the right flanks. As shown below, where each line represents an individual tumor and lines of the same color represent the tumors in the left and right flanks of the same rat, we observed destruction not only of the injected tumors in the right flanks, but also of the large un-injected tumors in the left flanks of 70% of the treated rats. As reflected in the top diagram of Figure 1 below, when formulation buffer with no RP1 was injected into "control" rats, no impact on the growth of the injected or un-injected tumors was observed. This effect of RP1 in both injected and un-injected tumors provides support for the potent systemic, or "abscopal," effect of RP1.

Figure 1: RP1 has been shown to treat large injected and un-injected tumors in rats



Phase 1/2 clinical trial in multiple tumor types

We are conducting a Phase 1/2 clinical trial of RP1 in approximately 150 patients. The first part of our Phase 1/2 clinical trial is currently being conducted in the United Kingdom and we intend to conduct the

second part of the clinical trial in both the United Kingdom and, pending the opening of an IND, in the United States. This is an open-label, multicenter study to investigate the safety, tolerability and efficacy of RP1. We have designed this clinical trial to study RP1 in tumor types that have been shown to have some level of responsiveness to anti-PD-1 or anti-PD-L1 therapy but where we believe there remains significant unmet medical need. In the first part of the clinical trial we are assessing the safety and tolerability of RP1, administered alone in a single tumor, in a minimum of 18 patients with advanced or metastatic solid tumors who have progressed on or cannot tolerate standard therapy. Following the dose escalation phase, up to 12 patients will be enrolled to receive RP1 administered into multiple tumors in combination with nivolumab. In the second part of the clinical trial, we will study the safety and efficacy of RP1 in combination with nivolumab in specific tumor types in four cohorts of approximately 30 patients each. These tumor types are metastatic melanoma, metastatic bladder cancer, microsatellite instability high cancer, and non-melanoma skin cancer. Depending on the tumor type, patients must be eligible to receive PD-1 directed therapy according to the product label or have exhausted, become intolerant to or refused currently available therapies. We have an agreement with BMS for the supply of nivolumab for this clinical trial.

We expect that the results from the first part of the clinical trial will help us determine the safety, tolerability and intended dose of RP1 for further development and to provide initial safety data for RP1 in combination with nivolumab. We have also designed the first part of the trial to provide insights on the effects of RP1 on tumors, including necrosis, inflammation and erythema, the biodistribution of RP1 in the blood, saliva and mucosa, and the impact of RP1 administration on anti-HSV-1 antibody responses. For the patients in the first part of the trial who also receive nivolumab, we will assess certain biomarkers indicative of immune activation in tumor biopsies. These include the infiltration of T cells, expression of PD-L1, and the presence of an "inflamed gene signature," each of which would indicate ongoing immune activation.

Of the approximately 30 patients in the first part of the clinical trial:

- Approximately half will receive RP1 using direct or ultrasound guided injection to administer RP1 to tumors located on or close to the skin, or into lymph nodes located near the skin; and

- Approximately half will receive RP1 using imaging guided injection to administer RP1 to tumors located deeper in the body, including in visceral organs such as the liver.

In the second part of the trial, we intend to continue to assess the safety and begin to assess the efficacy of RP1 in combination with nivolumab in four cohorts of approximately 30 patients, each with one of the different cancer types described above.

We have chosen these tumor types because they have shown that they have some level of underlying responsiveness to treatment with immune checkpoint blockade therapies but for which we believe considerable unmet medical need remains. We intend to expand the number of patients treated and/or add a control arm for each cohort where we see promising signs of efficacy, either as part of the same clinical trial or as separate trials, as a means to gather more definitive data in support of the clinical benefit of the combination of RP1 and nivolumab in these respective tumor types. We believe that the expanded clinical trials can be designed to support a filing with regulatory authorities for marketing approval.

In each of the four cohorts in the second part of the trial, we plan to assess efficacy under the clinical trial protocol by examining the rate and duration of responses, including partial responses (a 30% or greater reduction in tumor size) and complete responses (a complete eradication of the disease), as well as examining biomarkers of immune response and mechanism of action. For example, we expect that tumors

with no or low pre-existing immune responses as evidenced by no or low T cell infiltration at baseline would not respond to anti-PD-1 therapy. Responses in these patients would therefore suggest clinical benefit of the combination of RP1 with anti-PD-1. Likewise, an increase in post-treatment T cells infiltrating into tumors and/or an increase in inflammation as evidenced by the development of an inflammatory gene signature would also support the activity of RP1.

Clinical trial status

The first part of the ongoing Phase 1/2 clinical trial of RP1 commenced in October 2017 in the United Kingdom where 16 patients have been enrolled to date, including patients with melanoma, breast cancer, colorectal cancer, CSCC and esophageal cancer. Each of these patients has advanced, high tumor burden disease and has previously failed multiple other therapies including in clinical trials. Approximately half of the patients have received one or more lines of immune checkpoint blockade therapy. As of July 9, 2018, we have administered injections into a single tumor at first doses of $1x10^4$, $1x10^5$ and $1x10^6$ pfu/ml by direct injection and first doses of $1x10^4$ and $1x10^5$ pfu/ml by imaging guided injection into deeper lesions. Subsequent doses for direct injection have been given at up to $1x10^8$ pfu/ml and for deeper lesions at up to $1x10^6$ pfu/ml so far. Injections have been given up to five times in each patient. During screening and in the weeks following the injections, we have taken swabs of the tumor, biopsies, blood samples, urine samples, vital signs, photographs at various intervals and CT scans are specified at 30 days following the final dose of RP1.

The primary objectives of the first part of the trial are to provide an initial determination of the safety of RP1 alone and in combination with nivolumab and to determine the recommended dose for the second part of the trial. In addition, we intend to assess tumor size, erythema and inflammation in tumor biopsies for indications of biological activity.

The clinical trial is being conducted under the review of a safety review committee, which is responsible for reviewing safety data, deciding whether to move to the next dose cohort, determining the recommended Phase 2 dose, and identifying any safety concerns. The clinical trial is also subject to certain protocol defined safety stopping rules.

Preliminary data as of July 9, 2018 suggest that RP1 is well tolerated. We have observed the expected side effects of local inflammation and erythema combined with mild fevers and other influenza-like symptoms for several days. These side effects are consistent with the side effects previously reported for other oncolytic viruses. Although serious adverse events, or SAEs, have been observed in three of the 16 patients enrolled in the first part of our ongoing Phase 1/2 clinical trial of RP1 to date, these SAEs were determined to be related to the patients' underlying advanced cancer and not to treatment with RP1. No SAEs have been observed which were concluded to be related to RP1. One possible dose limiting toxicity, or DLT, elevated lipase levels, which did not meet the definition of an SAE, has been observed in one patient in the first deep visceral group cohort. At baseline, this patient was HSV seropositive and already had rising lipase levels. The patient received prior doses of $1x10^4$ pfu/ml and $1x10^5$ pfu/ml with the elevated lipase levels occurring after the patient's third dose, which was at a dose level of $1x10^6$ pfu/ml. The elevated lipase levels then resolved without clinical signs or symptoms being observed and following which two further doses of $1x10^6$ pfu/ml were given with no other potential DLTs occurring. The other two patients in that cohort, who were both HSV seronegative, and the first patient in the next dose level cohort in the deep visceral group, who was HSV seropositive and given doses of $1x10^5$, $1x10^6$ and three doses of $1x10^7$ pfu/ml, have not experienced any DLTs. However, per protocol, because a potential DLT was observed in the first dose level cohort following review of laboratory values during trial monitoring, this first dose level cohort in the deep visceral group is being expanded to include an additional three patients. As of July 9, 2018, two of these patients have been enrolled, with the first patient having received doses of $1x10^4$, $1x10^5$

and two doses of $1x10^6$ pfu/ml so far, and the second patient having received a single dose of $1x10^4$ pfu/ml, with no potential DLTs having been observed. While the first part of the clinical trial is being conducted in the United Kingdom, we intend to conduct the second part of the clinical trial in both the United Kingdom and, pending an opening of an IND, the United States. We may also consider additional countries for this clinical trial. We expect that data from the first part of our Phase 1/2 clinical trial of RP1 will be available in the first half of 2019.

Regulatory status

In the United Kingdom, prior to filing a Clinical Trial Authorization, or CTA, we participated in a pre-CTA meeting with the Medicines and Healthcare products Regulatory Agency, or MHRA, in February 2017. We subsequently filed our CTA with the MHRA in April 2017 and received full CTA approval from the MHRA in July 2017. In June 2018, the MHRA approved an amendment to the trial protocol to specify, among other things, that the anti-PD-1 therapy to be used is nivolumab, to specify that anti-PD-1 therapy will be included in the Phase 1 expansion cohort and to add nivolumab-specific information to the protocol.

In the United States, we participated in a pre-IND teleconference with the FDA in October 2017, during which the agency asked that we repeat one of the toxicology and biodistribution studies we previously conducted but with a longer follow-up than was used in the initial study. We filed an IND on February 23, 2018, to enable the FDA to review all other aspects of the IND, which we will update once the additional toxicology and biodistribution data are available. The FDA verbally informed us on March 23, 2018 and confirmed in writing on April 18, 2018 that, as expected, the IND was on clinical hold pending submission of the additional data and review by the FDA. The in-life phase of the toxicology and biodistribution study was completed in May 2018, and no material issues were observed. We anticipate that a draft unaudited toxicology report will be provided by the CRO by the end of July 2018, and intend to submit an amendment to the IND to the FDA in early August 2018.

Controlled Phase 2 clinical trial in CSCC

In the first half of 2019, we intend to initiate a randomized, controlled Phase 2 clinical trial of RP1 combined with cemiplimab, compared to cemiplimab alone, in approximately 240 patients with CSCC. The primary objective of this controlled Phase 2 clinical trial will be to assess the response rate of the combination therapy compared to treatment with anti-PD-1 therapy alone, with key secondary endpoints including the rate of complete response and the duration of response. If compelling clinical data are generated demonstrating the benefits of the combined treatment, we believe the data from the controlled Phase 2 clinical trial could support a filing with regulatory authorities for marketing approval.

Pipeline product candidate: RP2

We have designed our RP2 product candidate to express an anti-CTLA-4 antibody-like protein in order to block the inhibition of the immune response otherwise caused by CTLA-4. We believe that RP2 will offer advantages compared with current CTLA-4 approaches, including ipilimumab. By expressing anti-CTLA-4 only locally in the tumor and draining lymph nodes, we believe that activity will be retained, but that toxicity will be reduced. We intend that our RP2 product candidate will be used in combination with anti-PD-1 therapy, which we believe will result in both synergy with the oncolytic virus and the expression of the anti-CTLA-4 in the tumor.

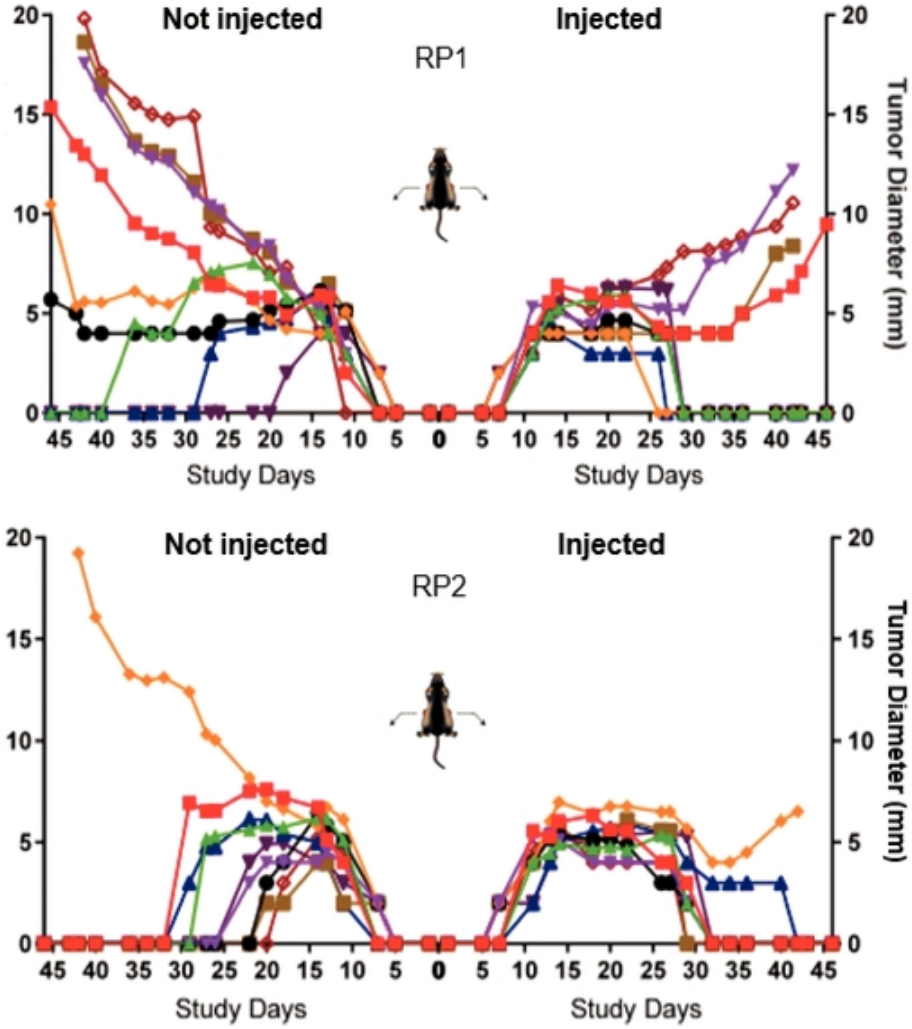
We intend to administer RP2 in combination with anti-PD-1 or anti-PD-L1 therapy in tumor types that are not responsive to anti-PD-1/L1 therapy alone, and in patients who have not responded to or who have progressed on prior anti-PD-1/L1 therapy. We expect to include patients with triple negative breast cancer and two further indications in our initial clinical trial with RP2. We intend to file an IND and foreign equivalents for RP2 and we expect that we will bring RP2 into clinical development in the first half of 2019.

Preclinical results

We are currently conducting preclinical development of RP2, including toxicology and biodistribution studies, with product already manufactured to GMP standards. Release testing is underway.

We have conducted preclinical tests comparing RP1 and RP2 to determine the effect of expressing the anti-CTLA-4 antibody-like protein, and have observed an enhanced effect with RP2. In one of these preclinical experiments, tumors were induced in both the left and right flanks of mice. Either RP1 or RP2 was then injected into the tumors in only the right flanks. As shown below in Figure 2, where each line represents an individual tumor and lines of the same color represent the tumors in the left and right flanks of the same mouse, we observed enhanced destruction of tumors with RP2 as compared to RP1, particularly of the un-injected tumors. In this experiment only a low dose of virus was used such that with RP1 un-injected tumors only partially responded to the treatment. This was to allow the potential benefits of anti-CTLA-4 expression to be observed. This experiment is illustrated in the figure below:

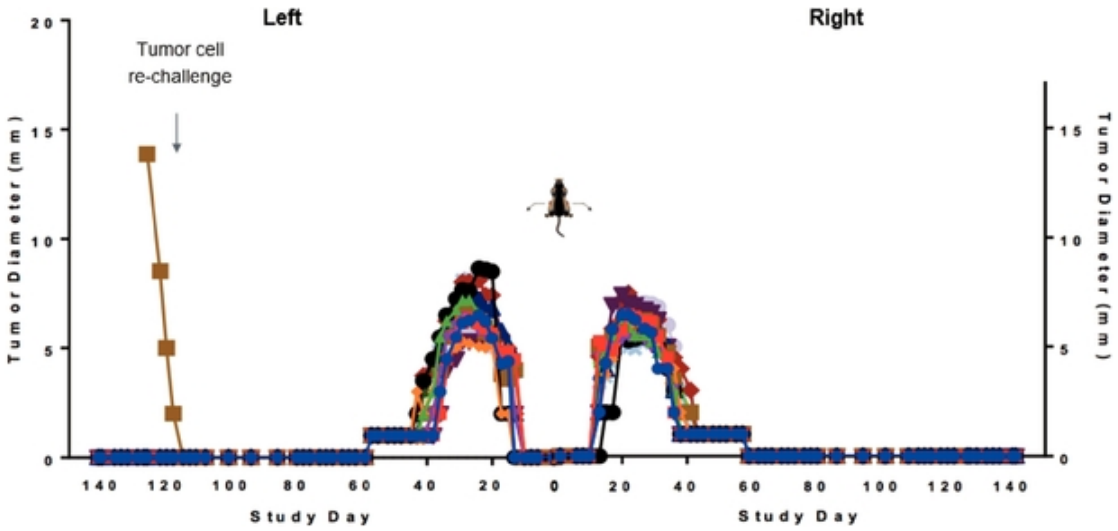
Figure 2: Expression of anti-CTLA-4 from RP2 showed an increased effect as compared to RP1 in mice



In a further experiment with RP2 in combination with anti-PD-1 therapy, we assessed the durability of response in mice in which tumors had been eradicated and whether these mice were protected against

re-challenge with tumor cells, which would demonstrate that memory immune responses had been induced. In this experiment 15 mice cured of bilateral tumors following administration of RP2 combined with an anti-PD-1 therapy were observed until day 108 following initiation of the experiment and then re-challenged with tumor cells to assess whether the mice were protected against the formation of new tumors. This demonstrated that anti-tumor effects were maintained throughout the experiment and that 14 out of the 15 mice were protected against re-challenge with tumor cells. This experiment is shown in the figure below. Treatment with anti-PD-1 alone has no anti-tumor effect in this model.

Figure 3: The treatment effect with RP2 was shown to be durable and induce memory immune responses in mice



Planned Phase 1/2 clinical trial

We are currently beginning protocol development for a Phase 1/2 clinical trial of RP2 in combination with anti-PD-1 therapy and intend to initiate the clinical trial in the first half of 2019.

Pipeline product candidate: RP3

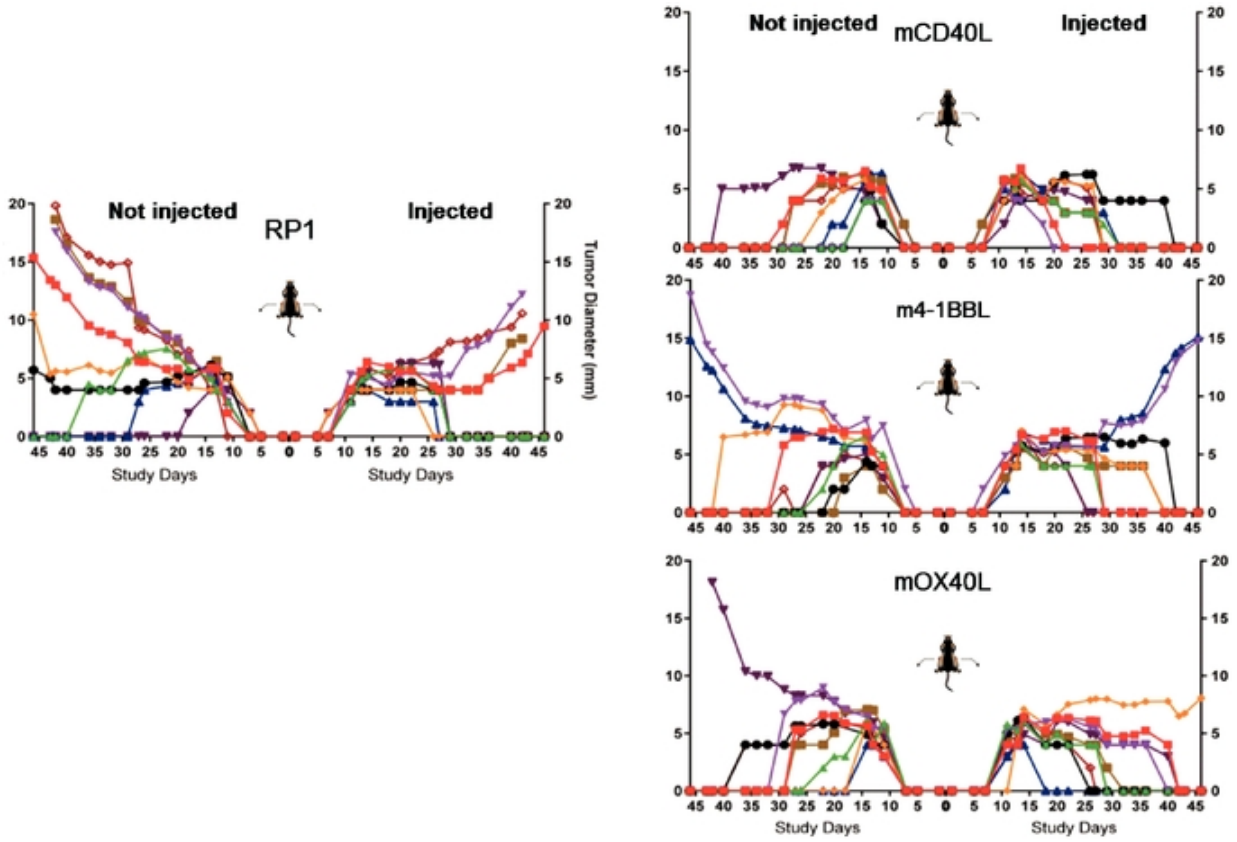
We are designing our RP3 product candidate to express immune-activating proteins that stimulate T cells, in addition to anti-CTLA-4 and GALV-GP R(-). These immune activating proteins are the ligands for various immune co-stimulatory pathways responsible for T cell proliferation and/or activation, including the CD40, OX40 and 4-1BB pathways. We plan to finalize the version of RP3 for clinical development during 2018. As with RP2, we intend to study RP3 in indications that have not so far responded to anti-PD-1 or anti-PD-L1 therapy. We expect to bring RP3 into clinical development in the first half of 2020.

Preclinical results

We have conducted preclinical tests to assess the benefit of expressing immune co-stimulatory pathway ligands, and have observed an enhanced effect associated with the expression of these proteins as compared to RP1. In one of these preclinical experiments, tumors were induced in both the left and right flanks of mice. Either RP1 or versions of RP1 additionally expressing the ligands which activate CD40, 4-1BB or OX40 were then injected into the tumors in only the right flanks. As shown below, where each line represents an individual tumor and lines of the same color represent the tumors in the left and right flanks of the same mouse, we observed enhanced destruction of tumors with the co-stimulatory pathway ligand expressing viruses as compared to RP1, particularly of the un-injected tumors. In this experiment

only a low dose of virus was used such that with RP1 un-injected tumors only partially responded to the treatment. This was to allow the potential benefits of co-stimulatory pathway ligand expression to be observed. This experiment is illustrated in the figure below:

Figure 4: Comparative effects of RP1 and equivalent viruses also expressing immune co-stimulatory pathway ligands in mice



Background on our target indications and current treatment options

Set forth below is a description of the target indications we currently intend to pursue with RP1 or RP2, as well as a summary of the existing treatment options for each target indication. When we refer to "response rates" below, we mean the observed reduction in tumor size, per the criteria set forth in the applicable clinical trial protocol; and when we refer to "complete response rate" below, we mean the observed complete eradication of disease in the patient.

Bladder cancer

According to the American Cancer Society, bladder cancer has an incidence of approximately 81,190 cases annually in the United States, with 17,240 deaths attributable to the disease in 2018. Although 77% of bladder cancer patients survive five years from diagnosis, the five-year relative survival rate for metastatic stage IV bladder cancer is just 15%.

Treatment depends on the stage of disease and may include some combination of surgery, radiation therapy, chemotherapy and immunotherapy. Surgical options may include transurethral resection, partial or complete removal of the bladder, or urinary diversion. Platinum-based chemotherapy is the standard of

care for patients with metastatic disease. Several regimens exist, though the combined treatment of methotrexate, vinblastine, doxorubicin, and cisplatin has been the preferred one; however, patients experience high toxicity associated with these therapies. Patients who relapsed after platinum-based therapy have median survival ranging from five to seven months and no known life-prolonging treatments exist. Immune checkpoint blockade therapies have since shown utility in recurrent advanced bladder cancer. Specifically, pembrolizumab, atezolizumab, avelumab and durvalumab have all been approved in various settings. Pembrolizumab received FDA accelerated approval for first-line use based on a study of 370 patients with locally advanced or metastatic urothelial carcinoma who were not eligible for platinum-containing chemotherapy. The response rate was 29% with a 7% complete response rate. Pembrolizumab is also FDA-approved for patients who have failed platinum-containing chemotherapy based on a 542 patient randomized, controlled clinical trial of pembrolizumab compared to chemotherapy. The response rate was 21% for pembrolizumab compared to 11% for chemotherapy, with complete response rates of 7% and 3%, respectively, and a 27% reduction in the risk of death observed.

Atezolizumab, a PD-L1 inhibitor, has also been found to be active in bladder cancer, and was granted accelerated approval by the FDA in 2016 for patients with locally advanced or metastatic urothelial carcinoma, who progressed on or after platinum-based chemotherapy on the basis of a 310 patient single arm study. Atezolizumab gave a response rate of 14.8% for all patients, a 9.5% response rate for patients with low PD-L1 expression, and a 26% response rate for patients with high PD-L1 expression. Complete response rates were 5.5%, 2.4%, and 12%, respectively. Avelumab and durvalumab, additional antibodies targeting PD-L1, were also granted accelerated approval by the FDA for the treatment of locally advanced and metastatic bladder cancer in May 2017. Avelumab is approved for patients with advanced or metastatic bladder cancer who have disease progression on or following platinum-containing chemotherapy and for patients having disease progression within 12 months of pre- or post-surgery platinum-containing chemotherapy on the basis of a 242 patient single arm clinical trial. The response rate was 13.3% after 13 or more weeks of follow up and 16.1% after six months or more of follow up, with complete response rates of 4% and 5.6%, respectively. There was no clear difference in response rate based on PD-L1 expression. Durvalumab is approved in the same patients on the basis of a single arm 182 patient clinical trial which gave a 17% response rate for all patients, a 26.3% response rate for patients with high PD-L1 expression, and a 4.1% response rate for patients with low PD-L1 expression. Complete response rates were 2.7%, 3.2%, and 1.4%, respectively.

Melanoma

According to the American Cancer Society, melanoma has an incidence of approximately 87,000 cases annually in the United States with over 9,300 deaths attributable to the disease in 2018. For patients with metastatic melanoma, five-year survival rates have historically been very low. While the majority of patients have clinically localized disease at presentation, advanced melanoma spreads in an unpredictable fashion, with widespread metastasis to any organ site but often to skin, lung, brain, liver, or small bowel. Since most cases of melanoma are diagnosed at an early stage and are curable with surgery alone, the standard treatment option for Stage I to resectable Stage III disease is surgery with or without lymph node dissection. For more advanced stages, until recently, treatment options were limited to chemotherapy, which is of unproven benefit, and Interleukin 2, or IL-2. IL-2 was approved by the FDA in 1998 on the basis of a 270 patient single arm study which demonstrated a 16% response rate and 6% complete response rate. While responses with IL-2 are often of long duration, toxicity is often substantial.

Since 2011, the immunotherapies ipilimumab, pembrolizumab, nivolumab, ipilimumab in combination with nivolumab, and T-Vec have received FDA approval in the United States, as have the molecular targeted therapies vemurafenib and dabrafenib in combination with trametinib. While response rates are often high,

they are also often of limited duration. The more recently approved immunotherapy products have generally been shown to give responses of longer duration.

Ipilimumab was approved on the basis of a 676 patient randomized, controlled trial comparing ipilimumab to a peptide vaccine. The response rate for ipilimumab was 10.9% compared to 1.5% for the peptide vaccine and the risk of death was reduced by 34%.

Pembrolizumab was approved in ipilimumab naïve patients on the basis of an 834 patient randomized, controlled Phase 3 clinical trial testing two dose regimens (every two weeks and every three weeks) of pembrolizumab versus ipilimumab. The response rates for pembrolizumab were 34% and 33%, respectively, and 12% for ipilimumab. The complete response rates were 5%, 6%, and 1%, respectively. This data included patients with both previously treated and previously untreated disease. In a separate trial, the complete response rate in previously untreated melanoma with pembrolizumab was 14% and for all patients, both previously treated and previously untreated, the complete response rate was 8%. The risk of death was reduced by 37% and 31% for pembrolizumab dosing every two weeks and every three weeks, respectively, as compared to treatment with ipilimumab. Pembrolizumab is also approved for ipilimumab refractory patients on the basis of a 540 patient Phase 3 clinical trial comparing the same two dosing regimens of pembrolizumab compared to chemotherapy. Response rates of 21% and 25% for pembrolizumab compared to 4% for chemotherapy and a 14% and 26% reduction in the risk of death, depending on the pembrolizumab dose, were observed. The complete response rate was 2% and 3% for pembrolizumab and 0% for chemotherapy.

Nivolumab was approved in patients with previously treated melanoma on the basis of a 120 patient clinical trial in which a response rate of 32% and a complete response rate of 3.3% was observed in patients treated with nivolumab. Nivolumab was also approved for previously untreated melanoma on the basis of a 418 patient clinical trial comparing nivolumab to chemotherapy in which response rates of 34% for nivolumab and 9% for chemotherapy were observed, with complete response rates of 4% for nivolumab and 1% for chemotherapy and a reduction in risk of death of 58% for nivolumab. Nivolumab was also approved in melanoma in combination with ipilimumab based on a 945 patient clinical trial in which ipilimumab naïve patients were treated with nivolumab alone, ipilimumab alone, or nivolumab together with ipilimumab. While toxicity in the combination arm of the trial was substantially increased as compared to the single agent treated patients, the response rate was 50% for the combination compared to 40% for nivolumab alone and 14% for ipilimumab alone, with complete response rates of 8.9%, 8.5% and 1.9%, respectively. There was also a reduction in the risk of death of 58% as compared to ipilimumab for the combination arm and of 43% for nivolumab compared to ipilimumab alone.

In 2015, T-Vec was approved for the local treatment of unresectable cutaneous, subcutaneous, and nodal lesions in patients with recurrent melanoma after initial surgery on the basis of a 436 patient Phase 3 clinical trial in which patients with previously treated or treatment naïve Stage IIIb to Stage IVM1c disease were randomized, two-to-one, to receive either T-Vec or subcutaneously administered GM-CSF. The primary endpoint was durable response rate, or DRR, the rate of responses lasting continuously for at least six months. The DRR was 16.3% for T-Vec compared to 2.1% for GM-CSF, the overall response rate was 26.4% for T-Vec compared to 5.7% for GM-CSF, and the complete response rate was 16.9% for T-Vec compared to 0.7% for GM-CSF. In combination with ipilimumab, in a 198 patient controlled Phase 2 clinical trial, T-Vec gave a response rate of 39%, compared to 18% for ipilimumab alone. In combination with pembrolizumab, T-VEC gave a response rate of 62% and complete response rate of 33% in a 21 patient Phase 1b clinical trial.

Non-melanoma skin cancer

Non-melanoma skin cancer, or NMSC, is the most common cancer affecting light-skinned individuals and the incidence is increasing worldwide. Although incidence varies by geography, about 80% of all NMSC cases are basal cell carcinoma, or BCC, while CSCC represents about 20%, and other cancer types represent only 1%. Included in that 1% are primary cutaneous lymphoma, sarcomas of the skin, Merkel cell carcinoma, and appendageal carcinoma. NMSC is often not reported to cancer registries, hence accurate estimates of incidence are difficult to obtain. In 2013, the World Health Organization estimated there to be 2-3 million cases per year. NMSCs, however, are most likely to be under-reported, particularly in light of a recent study that estimated there to be 3.5 million cases each year in the United States alone.

Cutaneous squamous cell carcinoma

According to the American Cancer Society, CSCC has an incidence of more than 700,000 cases annually in the United States, with approximately 4,000-9,000 deaths attributable to the disease each year, and is the second deadliest skin cancer after melanoma. Although the prognosis for patients with CSCC is generally favorable, if distant metastases occurs, the long-term prognosis is extremely poor. Most cases of CSCC can be successfully managed with a variety of simple procedures, such as cryotherapy, curettage and electro desiccation, topical treatments, or simple surgical excision. When lesions are more advanced, micrographic surgery, more extensive surgical resection, or radiation therapy are generally sufficient to control loco-regional disease. The five-year rate of cure in patients with large tumors is 70%, regardless of the treatment chosen. However, for those with metastatic disease, the long-term prognosis is reduced drastically.

Stage IV CSCC can be responsive to various chemotherapeutic agents. However, there are no standard or FDA-approved therapies. Targets being evaluated in clinical trials of CSCC include epidermal growth factor receptor inhibition with drugs such as cetuximab or erlotinib, as well as PD-1 inhibition with drugs such as cemiplimab. Cemiplimab is currently under review for approval in CSCC by the FDA based on data generated in a Phase 2 clinical trial of 82 patients with advanced CSCC in which cemiplimab demonstrated an overall response rate of 46.3%, together with data from a previous Phase 1 clinical trial in 26 patients which gave a 46.2% response rate and a compete response rate of 7.7%.

Basal cell cancer of the skin

Annual rates of basal cell cancer of the skin, or BCC, in the United States have been estimated at up to 485 and up to 253 cases of BCC per 100,000 males and females, respectively. Local treatment measures fail to control disease in 10% of patients, although metastatic disease is rare.

The most frequent site of metastatic involvement is the regional lymph node in 68% of cases. Dissemination through the blood may also occur, affecting the lungs and pleura, liver, and bones. The use of systemic therapy is limited to patients with distant metastases or locally advanced disease that is not suitable for surgery or radiation. In the cases of locally advanced or metastatic disease, systemic therapy with FDA-approved hedgehog pathway inhibitors is recommended. Typical outcomes with this approach include a 43% response rate, with a 7.6 month response duration, and a 30% response rate, with a 7.6 month duration, for locally advanced and metastatic disease, respectively, after which there is no approved therapy. Other drugs, including those targeting PD-1 and PI3K, are being studied in clinical trials.

Merkel cell carcinoma

Merkel cell carcinoma, or MCC, is a rare neuroendocrine malignancy of the skin predominately affecting elderly, light-skinned individuals and may also occur earlier and more frequently in immunosuppressed patients. The incidence of MCC is very low when compared to other cutaneous malignancies, with an

estimated 1,500 cases diagnosed annually in the United States. The typical clinical course of the disease is rapid progression of the primary tumor with early and frequent metastasis to the regional lymph nodes. In unresectable or metastatic MCC, chemotherapy achieves high remission rates. However, responses are usually short lived. In March 2017, avelumab, an anti-PD-L1 monoclonal antibody, was approved in the United States for patients with advanced MCC based upon a single-arm, open-label, Phase 2 clinical trial in 88 metastatic MCC patients who had failed at least one prior chemotherapy treatment. The response rate was 33% with a complete response rate of 11.4%.

Other rare non-melanoma skin cancers

There are many other types of rare skin malignancies that occur. As a group, these tumors are often highly aggressive and initially treated by surgical resection with or without local radiation therapy. Once these tumors recur locally or develop metastases, outcomes are usually poor and no effective systemic therapy is available. These rare tumors include dermatofibroma protuberans, angiosarcoma of the skin, non-HIV-related Kaposi's sarcoma, sebaceous cell carcinoma, and eccrine carcinoma.

Microsatellite instability high or mismatch repair deficient tumors

Microsatellite instability high, or MSI-H, or mismatch repair deficient, or dMMR, tumors are characterized by defects in DNA replication, particularly in the microsatellite regions. Typically, the nucleotide mismatches that occur during DNA replication are corrected by a proofreading system to correct these errors. Microsatellite instability describes the predisposition for mutations in the tandem repeat sequences due to uncorrected base insertion or deletion errors.

Although most microsatellites are located in noncoding regions of the genome, ill-placed uncorrected DNA replication errors can cause mutations within protein coding sequences, often resulting in the expression of functionally inactive mutant proteins that interfere with normal cell regulation and help to drive cancer. The number of mutation-associated neo-antigens resulting from mismatch-repair deficiency is more than 20 times higher than in tumors without this deficiency. The tumor microenvironment of dMMR tumors strongly expresses PD-L1, which indicates that an active response to the neo-antigens is underway.

The presence of MSI-H and dMMR tumors has been reported in diverse cancer types, including endometrial, ovarian, gastric, pancreas, ovary, prostate, central nervous system, and non-small cell lung cancers. The majority of the published data is based on studies of colorectal cancer patients. MSI-H tumors have been reported to be present in between 2% and 30% of primary colorectal tumors and 20% to 77% of metastatic lesions. Stage II colon cancers show higher rates of MSI-H than more advanced tumors, and rectal cancers and other left-sided colon cancers are noted to have lower frequencies of MSI-H tumors. The frequency of dMMR tumors in the other tumor types for which it has been reported is less well documented, and likely lower than seen in colorectal cancer.

Due to the high level of neo-antigens present, MSI-H tumors have been shown to respond to anti-PD-1 therapy. Pembrolizumab received accelerated approval by the FDA in 2017 for MSI-H solid tumors that have progressed following prior treatment, as well as in colorectal cancer that has progressed following chemotherapy. In five uncontrolled, single-arm clinical trials totaling 149 patients with diverse MSI-H tumor types, pembrolizumab gave a response rate of 39.6% and a complete response rate of 7.4%. In the 90 patient subset with MSI-H CRC, pembrolizumab gave a 36% response rate. Nivolumab was also granted accelerated approval for MSI-H colorectal cancer that has progressed following chemotherapy. In a single arm 74 patient clinical trial with nivolumab, the response rate was 32% and the complete response rate was 3%.

Triple negative breast cancer

According to the American Cancer Society, triple negative breast cancer, or TNBC, has an incidence of approximately 37,000 cases and approximately 6,000 deaths attributable to the disease annually in the United States. Globally, TNBC accounts for approximately 12% to 17% of all breast cancers, with approximately 170,000 new cases among an estimated 1 million cases of breast cancer diagnosed annually. As a group, patients with TNBC have poor outcomes relative to other breast cancer subtypes, with reduced disease-free and overall survival rates.

TNBC refers to any breast cancer that does not express the genes for estrogen receptor, progesterone receptor or Her2/neu. The lack of tumor expression of these receptors precludes the use of targeted therapies, making chemotherapy the primary systemic treatment for patients with TNBC in both the early and advanced-stages of disease. Although responses and complete responses are achieved, they are usually short in duration. Due to the limited efficacy of systemic chemotherapy, fewer than 30% of women with metastatic TNBC survive five years after diagnosis, and virtually all women with metastatic TNBC will ultimately die of the disease.

Studies have shown that the presence of tumor infiltrating lymphocytes, or TILs, is associated with better outcomes for TNBC. In addition, PD-L1 expression is associated with TILs and 20% to 30% of TNBCs express PD-L1. Based upon this high incidence of expression and demonstrated responses in other tumor types, immune-based approaches are being explored using immune checkpoint blockade therapies in TNBC. In a Phase Ib clinical trial of pembrolizumab in 32 heavily pretreated PD-L1-positive patients, the response rate was 18.5% and the complete response rate was 3.7% for the 27 patients who were evaluable for efficacy. A Phase 1 clinical trial of atezolizumab, a monoclonal antibody targeting PD-L1, in 27 heavily pretreated TNBC patients gave a response rate of 19% in 21 efficacy evaluable patients and a complete response rate of 9.5%. A Phase 2 trial (KEYNOTE-082) has also tested pembrolizumab in patients previously treated with chemotherapy for metastatic disease (Cohort A, 170 patients) and patients previously untreated with chemotherapy for metastatic disease with PD-L1 positive tumors (Cohort B, 84 patients). Cohort A gave a response rate of 4.8% for PD-L1 positive patients with a complete response rate of 1% and a response rate of 4.7% for PD-L1 negative patients with a complete response rate of 0.6%. Cohort B gave a response rate of 23% with a complete response rate of 3.6%. Both pembrolizumab and atezolizumab are being tested in Phase 3 trials as single agents or in combination with other therapies.

Intellectual property

We believe our rights under issued patents, if obtained, and patent applications will provide a competitive advantage. Our success depends in part on our ability to obtain and maintain proprietary protection for our product candidates, technology and know-how, to operate without infringing the proprietary rights of others and to prevent others from infringing upon our proprietary rights. Our policy is to seek to protect our proprietary position by, among other methods, filing United States and foreign patent applications related to our proprietary technology, inventions and improvements that are important to the development of our business. We also rely on trade secrets, know-how and continuing technological innovation to develop and maintain our proprietary position.

For the core technology in each of our product candidates, patent applications are pending under the Patent Cooperation Treaty, or PCT, and are currently at the international stage. As of July 9, 2018, we own five PCT applications and four U.S. provisional applications. The applications include claims to oncolytic virus compositions of matter, including RP1, pharmaceutical compositions encompassing the oncolytic viruses, and methods of use in treating cancer, including the target indications discussed above.

The term of individual patents depends upon the legal term of the patents in the countries in which they are obtained. In most countries in which we file, the patent term is 20 years from the earliest date of filing a non-provisional patent application. In the United States, the patent term of a patent that covers an FDA-approved drug may also be eligible for patent term extension, which permits patent term restoration of a portion of the patent term lost during the U.S. clinical development and FDA regulatory review process. The Hatch-Waxman Act permits a patent term extension of up to five years beyond the expiration of the patent. The length of the patent term extension is related to the length of time the drug is under clinical development in the United States and the length of time the drug is under regulatory review. Patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent applicable to an approved drug may be extended. Similar provisions are available in Europe and other foreign jurisdictions to extend the term of a patent that covers an approved drug. In the future, if and when our products receive FDA approval, and if and when patents grant, we expect to apply for patent term extensions on patents covering those products. We plan to seek patent term extensions to any of our issued patents in any jurisdiction where these are available, however there is no guarantee that the applicable authorities, including the FDA in the United States, will agree with our assessment of whether such extensions should be granted, and if granted, the length of such extensions.

We may rely, in some circumstances, on trade secrets to protect our technology. We seek to protect our proprietary technology and processes, in part, by confidentiality agreements with our employees, consultants, scientific advisors and other contractors, as well as physical security of our premises and our information technology systems.

Competition

The biotechnology and pharmaceutical industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary rights. We compete in the highly competitive markets that address cancer and face significant competition from many sources, including pharmaceutical, biopharmaceutical and biotechnology companies, as well as universities and private and public research institutions. Many of our competitors have significantly greater financial, manufacturing, marketing and drug development resources than we do. Large biopharmaceutical companies in particular have extensive experience in clinical testing and in obtaining regulatory approvals for drugs and biologicals. These companies also have significantly greater research capabilities than we do. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies or universities and research institutions.

Our competitors fall primarily into the following groups of treatment:

- traditional cancer therapies, including chemotherapy, surgery, radiation and targeted therapies;
- approved immunotherapy antibodies and immunotherapy antibodies in clinical trials;
- oncolytic immunotherapies, including T-Vec, the only FDA-approved oncolytic immunotherapy for treating advanced melanoma, and other oncolytic immunotherapies in clinical trials;
- therapies aimed at activating innate immunity such as those targeting STING and TLRs;
- cancer vaccines including personalized vaccines and those targeting tumor neo-antigens; and
- cell-based therapies, such as CAR-T, T cell receptor-based, and NK cell therapies.

Our commercial opportunity will be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer side effects, are easier to administer or are less expensive alone or in combination with other therapies than any products that we may develop alone or in combination with other therapies, especially if these get to market sooner than our products. These third parties also compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies and technology licenses complementary to our programs or advantageous to our business.

Our oncolytic product candidates, if and when marketed, will compete with a number of drugs that are currently marketed or in development that also target cancer but that utilize a different mechanism of action. To compete effectively with these agents, our product candidates will need to demonstrate advantages that lead to improved clinical efficacy and safety compared with these competitors. At the same time, however, we believe that our oncolytic product candidates, if and when ultimately marketed, would likely be used principally in combination with checkpoint blockade therapies in addition to existing cancer therapies, including surgery, chemotherapy, radiation therapy and other biological therapies such as antibodies targeting particular surface receptors. We therefore believe that our product candidates, if and when marketed, would largely complement rather than compete directly with these existing treatment options.

We do, however, expect to face direct and increasing competition from a number of companies that are also seeking to develop cancer therapies based on oncolytic viruses and other ways to prime the immune system, including neo-antigen vaccination. We believe that our ability to successfully compete will depend, among other things, on our ability to:

- expeditiously advance the development of our product candidates;
- design, enroll patients in and successfully complete appropriate clinical trials in a timely fashion;
- gain regulatory approval for our product candidates in their first indications as well as further indications;
- establish collaborations and partnerships for the development and marketing of our product candidates;
- commercialize our product candidates successfully, including convincing physicians, insurers and third-party payors of the safety and efficacy of our product candidates over currently approved therapies;
- secure and protect intellectual property rights based on our innovations; and
- manufacture or otherwise obtain and sell commercial quantities of future products to the market.

Manufacturing and suppliers

We have established an operations leadership team with extensive experience in manufacturing biologics based on viruses, including oncolytic products and gene therapy products, and in the construction, validation, approval and operation of facilities designed to manufacture biologics. Our team has already developed a robust and reproducible manufacturing process for our product candidates. We are also developing our product candidates for maximum practicality of use compared with some other oncolytic immunotherapies; in particular, our product candidates do not require refrigeration at -70^0 Celsius.

To date, our third-party contract manufacturer in Europe has been responsible for sourcing raw materials for use in the manufacture, in accordance with cGMP, of our product candidates for use in our planned early clinical trials. We currently use fetal bovine sera, a commonly used growth supplement, in the initial growth of the mammalian cells used in the production of our viral product candidates and a recombinant human protein to increase the stability of our drug formulation. We are in the process of developing our raw material supply chain for our product candidates as part of the process of establishing our own manufacturing facility and intend to enter into commercial supply, collaboration or similar agreements prior to conducting advanced clinical trials.

We have signed a lease for an approximately 63,000 square-foot facility in Framingham, Massachusetts where we plan to establish, equip, and operate our own in-house manufacturing facility in order to secure supplies for pivotal studies and commercial launch. This facility is intended to give us control over the whole supply chain for our products and product candidates. The facility is intended to be both multi-product and multi-use, so that we will be able to produce two different products in parallel and several different products in the same facility.

By establishing our own manufacturing facility, we aim to minimize or eliminate our reliance on contract manufacturing organizations, which typically have limited capacity at commercial scale and quality. We believe that having control over the whole manufacturing process will allow us to reduce cycle times and cost of goods for commercial production and to shorten overall timelines for new product candidates in our development pipeline, as well as help us to develop drug formulations or presentations to simplify distribution and/or administration of future oncolytic immunotherapies. We also believe that having a dedicated manufacturing facility will allow us to optimize commercial-scale processes and to develop a suitable workforce capable of supporting market launch.

Sales and marketing

None of our product candidates has been approved for sale. If and when our product candidates receive marketing approval, we intend to commercialize them on our own in the United States and potentially with pharmaceutical or biotechnology partners in other geographies. We currently have no sales, marketing or commercialization capabilities and have no experience as a company doing such activities. However, we intend to build the necessary capabilities and infrastructure over time following the advancement of our product candidates. Clinical data, the size of the opportunity and the size of the commercial infrastructure required will influence our commercialization plans and decision making.

Collaborations

BMS

On February 26, 2018, we entered into a Clinical Trial Collaboration and Supply Agreement with BMS. Pursuant to the agreement, BMS will provide to us, at no cost, nivolumab, its anti-PD-1 therapy, for use in combination with RP1 in our ongoing Phase 1/2 clinical trial. Under the agreement, we will sponsor, fund and conduct the clinical trial in accordance with an agreed-upon protocol. Under the agreement, BMS has granted us a non-exclusive, non-transferrable, royalty-free license (with a right to sublicense) under its intellectual property to use nivolumab in the clinical trial and has agreed to manufacture and supply nivolumab, at its cost and for no charge to us, for use in the clinical trial. Both parties will own any study data produced in the clinical trial, other than study data related solely to nivolumab, which will belong solely to BMS, or study data related solely to RP1, which will belong solely to us.

Unless earlier terminated, the agreement will remain in effect until (a) the completion of the clinical trial, (b) all related clinical trial data have been delivered to both parties and (c) the completion of any statistical analyses and bioanalyses contemplated by the clinical trial protocol or any analysis otherwise agreed upon by the parties. The agreement may be terminated by either party (i) in the event of an uncured material breach by the other party, (ii) in the event the other party is insolvent or in bankruptcy proceedings or (iii) for safety reasons. Upon termination, the licenses granted to us to use nivolumab in the clinical trial will terminate. The agreement contains representations, warranties, undertakings and indemnities customary for a transaction of this nature.

Regeneron

On May 29, 2018, we entered into a Master Clinical Trial Collaboration and Supply Agreement with Regeneron Pharmaceuticals, Inc., or Regeneron. Pursuant to the agreement we agreed to undertake one or more clinical trials with Regeneron for the administration of our product candidates in combination with cemiplimab, an anti-PD-1 therapy being developed by Regeneron, across multiple solid tumor types, the first of which is intended to be our planned Phase 2 clinical trial of RP1 in patients with CSCC. Each clinical trial will be conducted pursuant to an agreed study plan which, among other things, will identify the name of the sponsor and which party will manage the particular study, and include the protocol, the budget and a schedule of clinical obligations. The first study plan related to the Phase 2 clinical trial has been agreed.

Pursuant to the terms of the agreement, each party granted the other party a non-exclusive license of their respective intellectual property and agreed to contribute the necessary resources needed to fulfill their respective obligations, in each case, under the terms of the agreed study plans. Development costs of a particular clinical trial will be split equally. The agreement contains representations, warranties, undertakings and indemnities customary for a transaction of this nature. The agreement also contains certain covenants that restrict us from entering into a third-party arrangement with respect to the use of our product candidates in combination with an anti-PD-1 therapy and that restrict Regeneron from entering into a third-party arrangement with respect to the use of cemiplimab in combination with an HSV-1 virus, in each case, for the treatment of a tumor type that is the subject of a clinical trial to which the covenants apply. Unless otherwise mutually agreed in a future study plan, these covenants are only applicable to our planned Phase 2 clinical trial in CSCC, and expire upon the one-year anniversary of the commencement of the applicable study plan.

The agreement may be terminated by either party if (i) there is no active study plan for which a final study report has not been completed, (ii) the parties have not entered into a study plan for an additional clinical trial within a period of time after the delivery of the most recent final study report or (iii) in the event of a material breach.

Regulatory matters

Government authorities in the United States, at the federal, state, and local level, and in other countries, extensively regulate, among other things, the research, development, testing, approval, manufacture, packaging, storage, recordkeeping, labeling, advertising, promotion, distribution, marketing, import, and export of biopharmaceutical products such as those we are developing. In addition, manufacturers of biopharmaceutical products participating in Medicaid and Medicare are required to comply with mandatory price reporting, discount, and rebate requirements. The processes for obtaining regulatory approvals in the United States and in foreign countries, along with compliance with applicable statutes and regulations, require the expenditure of substantial time and financial resources.

FDA and EU regulation

In the United States, the FDA regulates biologics under the Federal Food, Drug, and Cosmetic Act, or FDCA, the Public Health Services Act, or PHSA, and their implementing regulations. The process required by the FDA before product candidates may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests, animal studies, and formulation studies in compliance with GLP regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin at United States clinical trial sites;

- approval by an IRB for each clinical site, or centrally, before each trial may be initiated;
- adequate and well-controlled human clinical trials to establish the safety, purity, and potency of the proposed product candidate for its intended use, performed in accordance with GCPs;
- development of manufacturing processes to ensure the product candidate's identity, strength, quality, purity, and potency;
- submission to the FDA of a BLA;
- satisfactory completion of an FDA advisory committee review, if applicable;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the products are produced to assess compliance with current cGMPs, and to assure that the facilities, methods, and controls are adequate to preserve the therapeutics' identity, strength, quality, purity, and potency as well as satisfactory completion of an FDA inspection of selected clinical sites and selected clinical investigators to determine GCP compliance; and
- FDA review and approval of the BLA to permit commercial marketing for particular indications for use.

Preclinical studies and IND submission

The testing and approval process of product candidates requires substantial time, effort, and financial resources. Satisfaction of the FDA's pre-market approval requirements typically takes many years and the actual time required may vary substantially based upon the type, complexity, and novelty of the product or disease. Preclinical studies include laboratory evaluation of chemistry, pharmacology, toxicity, and product formulation, as well as animal studies to assess potential safety and efficacy. Such studies must generally be conducted in accordance with the FDA's GLPs. Prior to commencing the first clinical trial at a United States investigational site with a product candidate, an IND sponsor must submit the results of the preclinical tests and preclinical literature, together with manufacturing information, analytical data, any available clinical data or literature, and proposed clinical study protocols among other things, to the FDA as part of an IND.

An IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, notifies the applicant of safety concerns or questions related to one or more proposed clinical trials and places the trial on a clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. Clinical holds also may be imposed by the FDA at any time before or during trials due to safety concerns or non-compliance. As a result, submission of an IND may not result in FDA authorization to commence a clinical trial. A separate submission to an existing IND must also be made for each successive clinical trial conducted during product development.

Clinical trials

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with federal regulations and GCP requirements, which include the requirements that all research subjects provide their informed consent in writing for their participation in any clinical trial, as well as review and approval of the study by an IRB. Investigators must also provide certain information to the clinical trial sponsors to allow the sponsors to make certain financial disclosures to the FDA. Clinical trials are conducted under protocols detailing, among other things, the objectives of the trial, the trial procedures, the parameters to be used in monitoring safety, the effectiveness criteria to be evaluated, and a statistical analysis plan. A protocol for each clinical trial, and

any subsequent protocol amendments, must be submitted to the FDA as part of the IND. In addition, an IRB at each study site participating in the clinical trial or a central IRB must review and approve the plan for any clinical trial, informed consent forms, and communications to study subjects before a study commences at that site. An IRB considers, among other things, whether the risks to individuals participating in the trials are minimized and are reasonable in relation to anticipated benefits, and whether the planned human subject protections are adequate. The IRB must continue to oversee the clinical trial while it is being conducted. Once an IND is in effect, each new clinical protocol and any amendments to the protocol must be submitted to the IND for FDA review, and to the IRB for approval. If a product candidate is being investigated for multiple intended indications, separate INDs may also be required. Progress reports detailing the results of the clinical trials must also be submitted at least annually to the FDA and the IRB and more frequently if serious adverse events or other significant safety information is found.

The FDA may order the temporary, or permanent, discontinuation of a clinical trial at any time, or impose other sanctions, if it believes that the clinical trial either is not being conducted in accordance with FDA requirements or presents an unacceptable risk to the clinical trial patients. An IRB may also require the clinical trial at the site to be halted, either temporarily or permanently, for failure to comply with the IRB's requirements or if the trial poses an unexpected serious harm to subjects. The FDA or an IRB may also impose conditions on the conduct of a clinical trial. Clinical trial sponsors may also choose to discontinue clinical trials as a result of risks to subjects, a lack of favorable results, or changing business priorities.

Information about certain clinical trials, including a description of the study and study results, must be submitted within specific timeframes to the National Institutes of Health, or NIH, for public dissemination on their clinicaltrials.gov website. Manufacturers or distributors of investigational products for the diagnosis, monitoring, or treatment of one or more serious diseases or conditions must also have a publicly available policy on evaluating and responding to requests for expanded access requests.

Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial that regularly reviews accumulated data and advises the study sponsor regarding the continuing safety of the trial. This group may also review interim data to assess the continuing validity and scientific merit of the clinical trial. This group receives special access to unblinded data during the clinical trial and may advise the sponsor to halt the clinical trial if it determined there is an unacceptable safety risk for subjects or on other grounds, such as no demonstration of efficacy.

The manufacture of investigational biologics for the conduct of human clinical trials is subject to current cGMP requirements. Investigational biologics and active ingredients imported into the United States are also subject to regulation by the FDA. Further, the export of investigational products outside of the United States is subject to regulatory requirements of the receiving country as well as United States export requirements under the FDCA.

In general, for purposes of BLA approval, human clinical trials are typically conducted in three sequential phases, which may overlap or be combined.

- Phase 1—Trials are initially conducted in healthy human volunteers or subjects with the target disease or condition and test the product candidate for safety, dosage tolerance, structure-activity relationships, mechanism of action, absorption, metabolism, distribution, and excretion. If possible, Phase 1 trials may also be used to gain an initial indication of product effectiveness.

- Phase 2—Controlled trials are conducted in limited subject populations with a specified disease or condition to evaluate the effectiveness of the product candidate for a particular indication or indications,

identify optimal dosages, dosage tolerance and schedule, possible adverse effects and safety risks, and expanded evidence of safety.

- Phase 3—These adequate and well-controlled clinical trials are undertaken in expanded subject populations, generally at geographically dispersed clinical trial sites, to generate enough data to provide statistically significant evidence of clinical efficacy and safety of the product for approval, to establish the overall risk-benefit profile of the product, and to provide adequate information for the labeling of the product. Typically, two Phase 3 trials are required by the FDA for product approval. Under some limited circumstances, however, the FDA may approve a BLA based upon a single Phase 3 clinical trials.

Additional kinds of data may also help to support a BLA, such as patient experience data.

Further, under certain circumstances, manufacturers and sponsors of investigational biopharmaceutical product candidates can provide access to the product candidates to certain qualifying patients outside of clinical trials. For instance, under the FDA's expanded access program, with FDA approval and subject to certain requirements, sponsors may provide access to product candidates to patients with serious or immediately life threatening diseases or conditions for which there is no comparable or satisfactory alternative therapy, provided that the potential patient benefit justifies the risks, the risks are not unreasonable in the context of the disease or condition to be treated, and the provision of the product candidate for the requested use will not interfere with clinical investigations. The specific expanded access criteria and requirements depend on the number of expanded access patients. Sponsors and investigators of expanded access programs must still comply with the FDA's clinical trial and are subject to protection regulations. Federal and state laws in the United States, referred to as right to try laws, also establish a separate mechanism through which certain patients with life threatening diseases or conditions, who have exhausted all approved treatment options and are unable to participate in a clinical trial, may request access to investigational product candidates that have completed a Phase 1 clinical trial. While certain criteria must be met for a patient to be eligible for access to product candidates under right to try laws, these laws do not require the FDA to approve the use of the product candidate and do not require compliance with the majority of the FDA's clinical trial regulations.

The FDA may also require, or companies may conduct, additional clinical trials for the same indication after a product is approved. These so-called Phase 4 trials may be made a condition to be satisfied after approval. The results of Phase 4 trials can confirm or refute the effectiveness of a product candidate, and can provide important safety information.

Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the product candidate as well as finalize a process for manufacturing the product in commercial quantities in accordance with current cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, manufacturers must develop methods for testing the identity, strength, quality, potency, and purity of the final product. Additionally, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

In relation to the clinical trial in the United Kingdom and in so far as trials will be conducted in other countries with a view to obtaining a marketing authorization from the European Medicines Agency, there are equivalent cGMP requirements and European Union regulatory rules that are implemented nationally. However, enforcement of such rules is conducted by the regulatory authority in which the trial is carried out, which is the MHRA in the United Kingdom.

BLA submission, review by the FDA, and marketing approval

Assuming successful completion of the required clinical and preclinical testing, the results of product development, including chemistry, manufacture, and controls, non-clinical studies, and clinical trial results, including negative or ambiguous results as well as positive findings, are all submitted to the FDA, along with the proposed labeling, as part of a BLA requesting approval to market the product for one or more indications. In most cases, the submission of a BLA is subject to a substantial application user fee. These user fees must be paid at the time of the first submission of the application, even if the application is being submitted on a rolling basis. Fee waivers or reductions are available in certain circumstances. One basis for a waiver of the application user fee is if the applicant employs fewer than 500 employees, including employees of affiliates, the applicant does not have an approved marketing application for a product that has been introduced or delivered for introduction into interstate commerce, and the applicant, including its affiliates, is submitting its first marketing application. Product candidates that are designated as orphan products, which are further described below, are also not subject to application user fees unless the application includes an indication other than the orphan indication.

In addition, under the Pediatric Research Equity Act, or PREA, a BLA or supplement to a BLA for a new active ingredient, indication, dosage form, dosage regimen, or route of administration, must contain data that are adequate to assess the safety and effectiveness of the product for the claimed indications in all relevant pediatric subpopulations, and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. Also, under the FDA Reauthorization Act of 2017, beginning in 2020, for applications for product candidates intended for the treatment of adult cancer which are directed at molecular targets that the FDA determines to be substantially relevant to the growth or progression of pediatric cancer, in place of the PREA investigations, sponsors must submit, with the application, reports from molecularly targeted pediatric cancer investigations designed to yield clinically meaningful pediatric study data, using appropriate formulations, to inform potential pediatric labeling. The FDA may, on its own initiative or at the request of the applicant, grant deferrals for submission of some or all pediatric data until after approval of the product for use in adults, or full or partial waivers from the pediatric data requirements. Orphan products are also exempt from the PREA requirements.

The FDA also may require submission of a REMS to ensure that the benefits of the biologic outweigh the risks. The REMS plan could include medication guides, physician communication plans, and elements to assure safe use, such as restricted distribution methods, patient registries, or other risk minimization tools. An assessment of the REMS must also be conducted at set intervals. Following product approval, a REMS may also be required by the FDA if new safety information is discovered and the FDA determines that a REMS is necessary to ensure that the benefits of the biologic outweigh the risks.

Once the FDA receives an application, it has 60 days to review the BLA to determine if it is substantially complete to permit a substantive review, before it accepts the application for filing. The FDA may request additional information rather than accept a BLA for filing. In this event, the application must be resubmitted with the additional information. The resubmitted application is also subject to review before the FDA accepts it for filing. Once the submission is accepted for filing, the FDA begins an in-depth substantive review.

Under the goals and policies agreed to by the FDA under the Prescription Drug User Fee Act, or PDUFA, the FDA has set the review goal of completing its review of 90% of all applications within ten months from the 60-day filing date for its initial review of a BLA. This review goal is referred to as the PDUFA date. The PDUFA date is only a goal, thus, the FDA does not always meet its PDUFA dates. The review process and

the PDUFA date may also be extended if the FDA requests or the sponsor otherwise provides substantial additional information or clarification regarding the submission.

The FDA may also refer certain applications to an advisory committee. Before approving a biologic for which no active ingredient, including any ester or salt of active ingredients, has previously been approved by the FDA, the FDA must either refer that biologic to an external advisory committee or provide in an action letter, a summary of the reasons why the FDA did not refer the product candidate to an advisory committee. An advisory committee is typically a panel that includes clinicians and other experts, which review, evaluate, and make a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

The FDA reviews applications to determine, among other things, whether a product is safe, pure and potent and whether the manufacturing methods and controls are adequate to assure and preserve the product's identity, strength, quality, potency, and purity. Before approving a BLA, the FDA typically will inspect the facility or facilities where the product is manufactured, referred to as a Pre-Approval Inspection. The FDA will not approve an application unless it determines that the manufacturing processes and facilities, including contract manufacturers and subcontractors, are in compliance with current cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving a BLA the FDA will inspect one or more clinical trial sites to assure compliance with GCPs.

After evaluating the BLA and all related information, including the advisory committee recommendation, if any, and inspection reports regarding the manufacturing facilities and clinical trial sites, the FDA may issue an approval letter, or, in some cases, a Complete Response Letter, or CRL. A CRL indicates that the review cycle of the application is complete and the application is not ready for approval and describes all of the specific deficiencies that the FDA identified in the BLA. A CRL generally contains a statement of specific conditions that must be met in order to secure final approval of the BLA, and may require additional clinical or preclinical testing in order for the FDA to reconsider the application. The deficiencies identified may be minor, for example, requiring labeling changes, or major, for example, requiring additional clinical trials. If a CRL is issued, the applicant may either: resubmit the BLA, addressing all of the deficiencies identified in the letter; withdraw the application; or request an opportunity for a hearing. The FDA has the goal of reviewing 90% of application resubmissions in either two or six months of the resubmission date, depending on the kind of resubmission. Even with submission of this additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval. If and when those conditions have been met to the FDA's satisfaction, the FDA may issue an approval letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications.

Even if the FDA approves a product, it may limit the approved indications for use of the product, require that contraindications, warnings, or precautions be included in the product labeling, including a boxed warning, require that post-approval studies, including Phase 4 clinical trials, be conducted to further assess a product's safety and efficacy after approval, require testing and surveillance programs to monitor the product after commercialization, or impose other conditions, including distribution restrictions or other risk management mechanisms under a REMS which can materially affect the potential market and profitability of the product. The FDA may also not approve label statements that are necessary for successful commercialization and marketing.

After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes, and additional labeling claims, are subject to further testing requirements and FDA review and approval. The FDA may also withdraw the product approval if compliance with the pre- and post-marketing regulatory standards are not maintained or if problems occur after the product reaches the marketplace. Further, should new safety information arise, additional testing, product labeling, or FDA notification may be required.

Broadly equivalent requirements and controls similarly apply to the submission of marketing authorization applications to the European Medicines Agency in the European Union and, post-approval, to the holding of such marketing authorizations.

Biosimilars and exclusivity

The BPCIA creates an abbreviated approval pathway for biological products shown to be highly similar to or interchangeable with an FDA-licensed reference biological product. Biosimilarity sufficient to reference a prior FDA-approved product requires a high similarity to the reference product notwithstanding minor differences in clinically inactive components, and no clinically meaningful differences between the biological product and the reference product in terms of safety, purity, and potency. Biosimilarity must be shown through analytical studies, animal studies, and at least one clinical trial, absent a waiver by the FDA. There must be no difference between the reference product and a biosimilar in mechanism of action, conditions of use, route of administration, dosage form, and strength. A biosimilar product may be deemed interchangeable with a prior approved product if it meets the higher hurdle of demonstrating that it can be expected to produce the same clinical results as the reference product and, for products administered multiple times, the biosimilar and the reference biologic may be switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic.

A reference biologic is granted 12 years of exclusivity from the time of first licensure of the reference product, and no application for a biosimilar can be submitted for four years from the date of licensure of the reference product. However, certain changes and supplements to an approved BLA, and subsequent applications filed by the same sponsor, manufacturer, licensor, predecessor in interest, or other related entity do not qualify for the twelve-year exclusivity period. The PHSA also includes provisions to protect reference products that have patent protection. The biosimilar product sponsor and reference product sponsor may exchange certain patent and product information for the purpose of determining whether there should be a legal patent challenge. Based on the outcome of negotiations surrounding the exchanged information, the reference product sponsor may bring a patent infringement suit and injunction proceedings against the biosimilar product sponsor. The biosimilar applicant may also be able to bring an action for declaratory judgment concerning the patent.

In the European Union there is a period of 10 years (or 11 years for significant new indications) of data exclusivity so that those seeking to market biosimilars cannot apply on an abridged basis for a marketing authorization for eight years from when the product was first marketed in the European Union and cannot place it on the market for 10 or 11 years from such first marketing.

If approved, biologics may also be eligible for periods of United States patent term restoration. If granted, patent term restoration extends the patent life of a single unexpired patent, that has not previously been extended, for a maximum of five years. The total patent life with the extension also cannot exceed fourteen years from the product's approval date. Subject to the prior limitations, the period of the extension is calculated by adding half of the time from the effective date of an IND to the initial submission of a marketing application, and all of the time between the submission of the marketing

application and its approval. This period may also be reduced by any time that the applicant did not act with due diligence.

In the European Union, a supplementary protection certificate, or SPC, can similarly extend a patent term for a maximum of five years. A six-month additional extension, however, is available if the SPC relates to a medicinal product for which data has been submitted according to a Pediatric Investigation Plan.

Post-approval requirements

Any products manufactured or distributed pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements related to manufacturing, recordkeeping, and reporting, including adverse experience reporting, deviation reporting, shortage reporting, and periodic reporting, product distribution, advertising, marketing, promotion, certain electronic records and signatures, and post-approval obligations imposed as a condition of approval, such as Phase 4 clinical trials, REMS, and surveillance to assess safety and effectiveness after commercialization.

After approval, most changes to the approved product, such as adding new indications or other labeling claims are subject to prior FDA review and approval. There also are continuing annual program user fee requirements for approved products, excluding, under certain circumstances, orphan products. In addition, manufacturers and other entities involved in the manufacture and distribution of approved therapeutics are required to register their establishments with the FDA and certain state agencies, list their products, and are subject to periodic announced and unannounced inspections by the FDA and these state agencies for compliance with current cGMP and other requirements, which impose certain procedural and documentation requirements upon us and third-party manufacturers. Manufacturers must continue to expend time, money, and effort in the areas of production and quality-control to maintain compliance with current cGMPs. Regulatory authorities may withdraw product approvals or request product recalls if a company fails to comply with regulatory standards, if it encounters problems following initial marketing, or if previously unrecognized problems are subsequently discovered.

Changes to the manufacturing process are strictly regulated and often require prior FDA approval or notification before being implemented. FDA regulations also require investigation and correction of any deviations from current cGMP and specifications, and impose reporting and documentation requirements upon the sponsor and any third-party manufacturers that the sponsor may decide to use. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain current cGMP compliance.

The FDA also strictly regulates marketing, labeling, advertising, and promotion of products that are placed on the market. A company can make only those claims relating to safety and efficacy, purity, and potency that are approved by the FDA. Physicians, in their independent professional medical judgment, may prescribe legally available products for unapproved indications that are not described in the product's labeling and that differ from those tested and approved by the FDA. Biopharmaceutical companies, however, are required to promote their products only for the approved indications and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability, including, but not limited to, criminal and civil penalties under the FDCA and False Claims Act, exclusion from participation in federal healthcare programs, mandatory compliance programs under corporate integrity agreements, suspension and debarment from government contracts, and refusal of orders under existing government contracts.

Moreover, the enacted Drug Quality and Security Act imposes obligations on manufacturers of biopharmaceutical products related to product tracking and tracing. Among the requirements of this legislation, manufacturers are required to provide certain information regarding the products to individuals and entities to which product ownership is transferred, will be required to label products with a product identifier, and are required to keep certain records regarding the product. The transfer of information to subsequent product owners by manufacturers is also required to be done electronically. Manufacturers must also verify that purchasers of the manufacturers' products are appropriately licensed. Further, under this legislation, manufactures have product investigation, quarantine, disposition, and notification responsibilities related to counterfeit, diverted, stolen, and intentionally adulterated products that would result in serious adverse health consequences or death to humans, as well as products that are the subject of fraudulent transactions or which are otherwise unfit for distribution such that they would be reasonably likely to result in serious health consequences or death. Similar requirements additionally are and will be imposed through this legislation on other companies within the biopharmaceutical product supply chain, such as distributors and dispensers.

Adverse event reporting and submission of periodic reports, including annual reports and deviation reports, are required following FDA approval of a BLA. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in significant regulatory actions. Such actions may include refusal to approve pending applications, license suspension or revocation, imposition of a clinical hold or termination of clinical trials, warning letters, untitled letters, cyber letters, modification of promotional materials or labeling, provision of corrective information, imposition of post-market requirements including the need for additional testing, imposition of distribution or other restrictions under a REMS, product recalls, product seizures or detentions, refusal to allow imports or exports, total or partial suspension of production or distribution, FDA debarment, injunctions, fines, consent decrees, corporate integrity agreements, suspension and debarment from government contracts, and refusal of orders under existing government contracts, exclusion from participation in federal and state healthcare programs, restitution, disgorgement, or civil or criminal penalties, including fines and imprisonment, and result in adverse publicity, among other adverse consequences.

Additional controls for biologics

To help reduce the increased risk of the introduction of adventitious agents, the PHSA emphasizes the importance of manufacturing controls for products whose attributes cannot be precisely defined. The PHSA also provides authority to the FDA to immediately suspend licenses in situations where there exists a danger to public health, to prepare or procure products in the event of shortages and critical public health needs, and to authorize the creation and enforcement of regulations to prevent the introduction or spread of communicable diseases in the United States and between states.

After a BLA is approved, the product may also be subject to official lot release as a condition of approval. As part of the manufacturing process, the manufacturer is required to perform certain tests on each lot of the product before it is released for distribution. If the product is subject to official release by the FDA, the manufacturer submits samples of each lot of product to the FDA together with a release protocol showing the results of all of the manufacturer's tests performed on the lot. The FDA may also perform certain confirmatory tests on lots of some products before releasing the lots for distribution by the manufacturer.

In addition, the FDA conducts laboratory research related to the regulatory standards on the safety, purity, potency, and effectiveness of biological products.

Fraud and abuse, data privacy and security, and transparency laws and regulations

Our business activities, including but not limited to, research, sales, promotion, distribution, medical education, and other activities following product approval will be subject to regulation by numerous federal and state regulatory and law enforcement authorities in the United States in addition to the FDA, including potentially the Department of Justice, the Department of Health and Human Services and its various divisions, including the CMS and the Health Resources and Services Administration, the Department of Veterans Affairs, the Department of Defense, and state and local governments. Our business activities must comply with numerous healthcare laws, including but not limited to, anti-kickback and false claims laws and regulations as well as data privacy and security laws and regulations, which are described below, as well as state and federal consumer protection and unfair competition laws.

The federal Anti-Kickback Statute, which regulates, among other things, marketing practices, educational programs, pricing policies, and relationships with healthcare provides or other entities, prohibits, among other things, any person or entity, from knowingly and willfully offering, paying, soliciting, or receiving any remuneration, directly or indirectly, overtly or covertly, in cash or in kind, to induce or in return for purchasing, leasing, ordering, or arranging for or recommending the purchase, lease, or order, or the referral to another for the furnishing or arranging for the furnishing of any item or service reimbursable under Medicare, Medicaid, or other federal healthcare programs, in whole or in part. The term "remuneration" has been interpreted broadly to include anything of value. The Anti-Kickback Statute has been interpreted to apply to arrangements between biopharmaceutical manufacturers on one hand and prescribers, purchasers, formulary managers, and beneficiaries on the other, as well as free trial and starter prescriptions provided through pharmacies. There are certain statutory exceptions and regulatory safe harbors protecting some common activities from prosecution. The exceptions and safe harbors are drawn narrowly, and practices that involve remuneration that may be alleged to be intended to induce prescribing, purchases, or recommendations may be subject to scrutiny if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all of its facts and circumstances. Several courts have interpreted the statute's intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the statute has been violated. The ACA modified the intent requirement under the Anti-Kickback Statute to a stricter standard, such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, the ACA also provided that a violation of the federal Anti-Kickback Statute is grounds for the government or a whistleblower to assert that a claim for payment of items or services resulting from such violation constitutes a false or fraudulent claim for purposes of the federal civil False Claims Act.

The federal civil False Claims Act prohibits, among other things, any person or entity from knowingly presenting, or causing to be presented, a false or fraudulent claim for payment to, or approval by, the federal government, knowingly making, using, or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government, or avoiding, decreasing, or concealing an obligation to pay money to the federal government. A claim includes "any request or demand" for money or property presented to the U.S. government. The civil False Claims Act has been used to assert liability on the basis of kickbacks and other improper referrals, improperly reported government pricing metrics such as Best Price or Average Manufacturer Price, improper use of Medicare provider or supplier numbers when detailing a provider of services, improper promotion of off-label uses not expressly approved by the FDA in a product's label, and allegations as to misrepresentations with respect to the services rendered. In

addition, private payers have been filing follow-on lawsuits alleging fraudulent misrepresentation, although establishing liability and damages in these cases is more difficult than under the False Claims Act. Intent to deceive is not required to establish liability under the civil False Claims Act. Civil False Claims Act actions may be brought by the government or may be brought by private individuals on behalf of the government, called "qui tam" actions. If the government decides to intervene in a qui tam action and prevails in the lawsuit, the individual will share in the proceeds from any fines or settlement funds. If the government declines to intervene, the individual may pursue the case alone. The civil False Claims Act provides for treble damages and a civil penalty for each false claim, such as an invoice or pharmacy claim for reimbursement, which can aggregate into millions of dollars. For these reasons, since 2004, False Claims Act lawsuits against biopharmaceutical companies have increased significantly in volume and breadth, leading to several substantial civil and criminal settlements, as much as $3.0 billion, regarding certain sales practices and promoting off label uses. Civil False Claims Act liability may further be imposed for known Medicare or Medicaid overpayments, for example, overpayments caused by understated rebate amounts, that are not refunded within 60 days of discovering the overpayment, even if the overpayment was not caused by a false or fraudulent act. In addition, conviction or civil judgment for violating the False Claims Act may result in exclusion from federal health care programs, and suspension and debarment from government contracts, and refusal of orders under existing government contracts.

The government may further prosecute conduct constituting a false claim under the criminal False Claims Act. The criminal False Claims Act prohibits the making or presenting of a claim to the government knowing such claim to be false, fictitious, or fraudulent and, unlike the civil False Claims Act, requires proof of intent to submit a false claim.

The civil monetary penalties statute is another potential statute under which biopharmaceutical companies may be subject to enforcement. Among other things, the civil monetary penalties statue imposes fines against any person who is determined to have knowingly presented, or caused to be presented, claims to a federal healthcare program that the person knows, or should know, is for an item or service that was not provided as claimed or is false or fraudulent.

Payment or reimbursement of prescription therapeutics by Medicaid or Medicare requires manufacturers to submit certified pricing information to CMS. The Medicaid Drug Rebate statute requires manufacturers to calculate and report price points, which are used to determine Medicaid rebate payments shared between the states and the federal government and Medicaid payment rates for certain therapeutics. For therapeutics paid under Medicare Part B, manufacturers must also calculate and report their Average Sales Price, which is used to determine the Medicare Part B payment rate. In addition, therapeutics covered by Medicaid are subject to an additional inflation penalty which can substantially increase rebate payments. For products approved under a BLA, (including biosimilars) or an NDA, the VHCA requires manufacturers to calculate and report to the Veterans Administration, or VA, a different price called the Non-Federal Average Manufacturing Price, which is used to determine the maximum price that can be charged to certain federal agencies, referred to as the Federal Ceiling Price, or FCP. Like the Medicaid rebate amount, the FCP includes an inflation penalty. A Department of Defense regulation requires manufacturers to provide this discount on therapeutics dispensed by retail pharmacies when paid by the TRICARE Program. All of these price reporting requirements create risk of submitting false information to the government, and potential FCA liability.

The VHCA also requires manufacturers of covered therapeutics participating in the Medicaid program to enter into Federal Supply Schedule contracts with the VA through which their covered therapeutics must be sold to certain federal agencies at FCP. This necessitates compliance with applicable federal procurement laws and regulations, including submission of commercial sales and pricing information, and

subjects us to contractual remedies as well as administrative, civil, and criminal sanctions. In addition, the VHCA requires manufacturers participating in Medicaid to agree to provide different mandatory discounts to certain Public Health Service grantees and other safety net hospitals and clinics under the 340B program based on the manufacturer's reported Medicaid pricing information. The 340B program has its own regulatory authority to impose sanctions for non-compliance and adjudicate overcharge claims against manufacturers by the purchasing entities.

The HIPAA, also created federal criminal statutes that prohibit, among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud or to obtain, by means of false or fraudulent pretenses, representations or promises, any of the money or property owned by, or under the custody or control of, a healthcare benefit program, regardless of whether the payor is public or private, in connection with the delivery or payment for health care benefits, knowingly and willfully embezzling or stealing from a health care benefit program, willfully obstructing a criminal investigation of a health care offense and knowingly and willfully falsifying, concealing, or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items, or services relating to healthcare matters. Additionally, the ACA amended the intent requirement of certain of these criminal statutes under HIPAA so that a person or entity no longer needs to have actual knowledge of the statute, or the specific intent to violate it, to have committed a violation.

The ACA further created new federal requirements for reporting, by applicable manufacturers of covered therapeutics, payments and other transfers of value to physicians and teaching hospitals, and ownership and investment interests held by physicians and other healthcare providers and their immediate family members.

Further, we may be subject to data privacy and security regulation by both the federal government and the states in which we conduct our business. HIPAA, as amended by HITECH, and its respective implementing regulations imposes certain requirements on covered entities relating to the privacy, security, and transmission of certain individually identifiable health information known as protected health information. Among other things, HITECH, through its implementing regulations, makes HIPAA's security standards and certain privacy standards directly applicable to business associates, defined as a person or organization, other than a member of a covered entity's workforce, that creates, receives, maintains, or transmits protected health information on behalf of a covered entity for a function or activity regulated by HIPAA. HITECH also strengthened the civil and criminal penalties that may be imposed against covered entities, business associates, and individuals, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions. In addition, other federal and state laws may govern the privacy and security of health and other information in certain circumstances, many of which differ from each other in significant ways and may not be preempted by HIPPA, thus complicating compliance efforts.

Many states have also adopted laws similar to each of the above federal laws, which may be broader in scope and apply to items or services reimbursed by any third-party payor, including commercial insurers. Certain state laws also regulate manufacturers' use of prescriber-identifiable data. Certain states also require implementation of commercial compliance programs and compliance with the pharmaceutical industry's voluntary compliance guidelines and the applicable compliance guidance promulgated by the federal government, or otherwise restrict payments or the provision of other items of value that may be made to healthcare providers and other potential referral sources; impose restrictions on marketing practices; or require manufacturers to track and report information related to payments, gifts, and other

items of value to physicians and other healthcare providers. Recently, states have enacted or are considering legislation intended to make drug prices more transparent and deter significant price increases. These laws may affect our future sales, marketing, and other promotional activities by imposing administrative and compliance burdens.

If our operations are found to be in violation of any of the laws or regulations described above or any other laws that apply to us, we may be subject penalties or other enforcement actions, including criminal and significant civil monetary penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in government healthcare programs, corporate integrity agreements, suspension and debarment from government contracts, and refusal of orders under existing government contracts, reputational harm, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. Enforcement actions can be brought by federal or state governments, or as "qui tam" actions brought by individual whistleblowers in the name of the government under the civil False Claims Act if the violations are alleged to have caused the government to pay a false or fraudulent claim.

To the extent that any of our products are sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-marketing requirements, including safety surveillance, anti-fraud and abuse laws, and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals. In the European Union, the data privacy laws are generally perceived to be stricter than those which apply in the United States and include specific requirements for the transfer of personal data outside the European Union to the United States to ensure that European Union standards of data privacy will be applied to such data.

Coverage and reimbursement generally

The commercial success of our product candidates and our ability to commercialize any approved product candidates successfully will depend in part on the extent to which governmental payor programs at the federal and state levels, including Medicare and Medicaid, private health insurers, and other third-party payors provide coverage for and establish adequate reimbursement levels for our product candidates. Government authorities, private health insurers, and other organizations generally decide which therapeutics they will pay for and establish reimbursement levels for healthcare. Medicare is a federally funded program managed by CMS through local fiscal intermediaries and carriers that administer coverage and reimbursement for certain healthcare items and services furnished to the elderly and disabled. Medicaid is an insurance program for certain categories of patients whose income and assets fall below state defined levels and who are otherwise uninsured that is both federally and state funded and managed by each state. The federal government sets general guidelines for Medicaid and each state creates specific regulations that govern its individual program, including supplemental rebate programs that restrict coverage to therapeutics on the state Preferred Drug List. Similarly, government laws and regulations establish the parameters for coverage of prescription therapeutics by health plans participating in state exchanges and Tricare, the health care program for military personnel, retirees, and related beneficiaries. Some states have also created pharmacy assistance programs for individuals who do not qualify for federal programs. In the United States, private health insurers and other third-party payors often provide reimbursement for products and services based on the level at which the government provides reimbursement through the Medicare or Medicaid programs for such products and services.

In the United States, the European Union, and other potentially significant markets for our product candidates, government authorities and third-party payors are increasingly attempting to limit or regulate the price of medical products and services, particularly for new and innovative products and therapies, which often has resulted in average selling prices lower than they would otherwise be and sometimes at or below the provider's acquisition cost. In the United States, it is also common for government and private health plans to use coverage determinations to leverage rebates from manufacturers in order to reduce the plans' net costs. These restrictions and limitations influence the purchase of healthcare services and products and lower the realization on manufacturers' sales of prescription therapeutics. Third-party payors are developing increasingly sophisticated methods of controlling healthcare costs. Third-party payors may limit coverage to specific therapeutic products on an approved list, or formulary, which might not include all of the FDA-approved products for a particular indication or might impose high copayment amounts to influence patient choice. Third-party payors also control costs by requiring prior authorization or imposing other dispensing restrictions before covering certain products and by broadening therapeutic classes to increase competition. Third-party payors are increasingly challenging the price and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. Absent clinical differentiators, third-party payors may treat products as therapeutically equivalent and base formulary decisions on net cost. To lower the prescription cost, manufacturers frequently rebate a portion of the prescription price to the third-party payors. Recently, purchasers and third-party payors have begun to focus on value of new therapeutics and sought agreements in which price is based on achievement of performance metrics.

Federal programs also impose price controls through mandatory ceiling prices on purchases by federal agencies and federally funded hospitals and clinics and mandatory rebates on retail pharmacy prescriptions paid by Medicaid and Tricare. These restrictions and limitations influence the purchase of healthcare services and products. Legislative proposals to reform healthcare or reduce costs under government programs may result in lower reimbursement for our product candidates or exclusion of our product candidates from coverage. In addition, government programs like Medicaid include substantial penalties for increasing commercial prices over the rate of inflation which can affect realization and return on investment.

Private payors often rely on the lead of the governmental payors in rendering coverage and reimbursement determinations. Therefore, achieving favorable CMS coverage and reimbursement is usually a significant gating issue for successful introduction of a new product. In addition, many government programs as a condition of participation mandate fixed discounts or rebates from manufacturers regardless of formulary position or utilization, and then rely on competition in the market to attain further price reductions, which can greatly reduce realization on the sale.

Further, the increased emphasis on managed healthcare in the United States and on country and regional pricing and reimbursement controls in the European Union will put additional pressure on product pricing, reimbursement, and utilization, which may adversely affect our future product sales and results of operations. These pressures can arise from rules and practices of managed care groups, competition within therapeutic classes, judicial decisions and governmental laws and regulations related to Medicare, Medicaid, and healthcare reform, biopharmaceutical coverage and reimbursement policies, and pricing in general. Patients who are prescribed treatments for their conditions and providers performing the prescribed services generally rely on third-party payors to reimburse all or part of the associated healthcare costs. Sales of our product candidates will therefore depend substantially, both domestically and abroad, on the extent to which the costs of our products will be paid by health maintenance, managed care, pharmacy benefit and similar healthcare management organizations, or reimbursed by government health

administration authorities, such as Medicare and Medicaid, private health insurers, and other third-party payors.

As a result of the above, we may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of our products, in addition to the costs required to obtain the FDA approvals. Our product candidates may not be considered medically necessary or cost-effective, or the rebate percentages required to secure coverage may not yield an adequate margin over cost.

Moreover, a payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in therapeutic development. Legislative proposals to reform healthcare or reduce costs under government insurance programs may result in lower reimbursement for our products and product candidates or exclusion of our products and product candidates from coverage. The cost containment measures that healthcare payors and providers are instituting and any healthcare reform could significantly reduce our revenues from the sale of any approved product candidates. We cannot provide any assurances that we will be able to obtain and maintain third-party coverage or adequate reimbursement for our product candidates in whole or in part.

The absence in Europe of any substantive harmonization of pricing and reimbursement regimes, including health technology assessment, means that separate negotiations will need to take place with the relevant authorities in each member state.

Healthcare reform measures

The United States and some foreign jurisdictions are considering or have enacted a number of legislative and regulatory proposals designed to change the healthcare system in ways that could affect our ability to sell our products profitably. Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality, and expanding access. In the United States, the biopharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

For example, Medicare Part B, which covers products administered by physicians in an outpatient setting, may be undergoing a significant change in payment rates. CMS has proposed a rule that would compensate physicians for therapeutics they administer based on a smaller mark-up over the manufacturer's Average Sales Price and a fixed fee, which is intended to incentivize physicians to purchase and bill Medicare for lower priced products. The proposed rule would also authorize CMS to establish methods for determining comparative cost effectiveness and seek value-based discounts

Similarly, the American Recovery and Reinvestment Act of 2009 established funding for the federal government to compare the effectiveness of different treatments for the same illness. The Agency for Healthcare Research and Quality among other things, conducts patient-centered outcome research, develops evidence-based tools and resources on medication therapies, maintains databases of health care related data and standards, and issues periodic reports on specific studies. Although the results of the comparative effectiveness studies are not intended to mandate coverage policies for public or private payors, it is not clear what effect, if any, the organization's research has had or will have on the sales of any product, if any such product or the condition that it is intended to treat is the subject of a study. It is also possible that comparative effectiveness research demonstrating benefits in a competitor's product

could adversely affect the sales of our product candidates. If third-party payors do not consider our product candidates to be cost-effective compared to other available therapies, they may not cover our product candidates, once approved, as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow us to sell our products on a profitable basis.

Moreover, the ACA broadened access to health insurance, attempts to reduce or constrain the growth of healthcare spending, enhanced remedies against fraud and abuse, added new transparency requirements for healthcare and health insurance industries, imposed new taxes and fees on the health care industry, and imposed additional health policy reforms. The law expanded the eligibility criteria and mandatory eligibility categories for Medicaid programs, thereby potentially increasing both the volume of sales and manufacturers' Medicaid rebate liability. The law also expanded the 340B discount program that mandates discounts to certain hospitals, community centers, and other qualifying providers, by expanding the categories of entities eligible to purchase under the program, although, with the exception of children's hospitals, these newly eligible entities are ineligible to receive discounted 340B pricing on orphan therapeutics used to treat an orphan disease or condition. The ACA revised the definition of "average manufacturer price, or AMP, for reporting purposes, which generally increased the amount of Medicaid rebates to states and created a separate AMP for certain categories of therapeutics provided in non-retail outpatient settings. The law additionally extended manufacturer's Medicaid rebate liability to covered therapeutics dispensed to patients enrolled in Medicaid managed care organizations and increased the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate program. The revisions to the AMP definition and Medicaid rebate formula can have the further effect of increasing the required 340B discounts. Further, the ACA requires manufacturers of therapeutics, to pay 50% of the pharmacy charge to Medicare Part D patients while they are in the coverage gap, and this percentage was increased to 70% by the Bipartisan Budget Act of 2018. Finally, the ACA imposes a significant annual fee on companies that manufacture or import branded prescription therapeutic products. Substantial new provisions affecting compliance have also been enacted through the ACA and otherwise, including the reporting of therapeutic sample distribution, which may require us to modify our business practices with healthcare practitioners. Although the ACA was recently amended to repeal the individual insurance mandate, and efforts to repeal and replace portions of the law may continue, it is likely that pressure on biopharmaceutical pricing, especially under the Medicare program, will continue, and may also increase our regulatory burdens and operating costs. Moreover, in the coming years, additional changes could be made to governmental healthcare programs that could significantly impact the success of our product candidates. Recently, CMS issued regulations reducing Medicare Part B payments to certain hospitals for outpatient therapeutics purchased under the 340B program.

The cost of biopharmaceuticals continues to generate substantial governmental and third-party payor interest. We expect that the biopharmaceutical industry will experience pricing pressures due to the trend toward managed healthcare, the increasing influence of managed care organizations and additional legislative proposals. Our results of operations could be adversely affected by current and future healthcare reforms.

Some third-party payors also require pre-approval of coverage for new or innovative devices or therapies before they will reimburse healthcare providers that use such therapies. While we cannot predict whether any proposed cost-containment measures will be adopted or otherwise implemented in the future, the announcement or adoption of these proposals could have a material adverse effect on our ability to obtain adequate prices for our product candidates and operate profitably.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. The Budget Control Act of 2011, as amended, created the Joint Select Committee on Deficit Reduction to

recommend proposals in spending reductions to Congress. The Joint Select Committee on Deficit Reduction did not achieve its targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, triggering the legislation's automatic reductions to several government programs. These reductions include aggregate reductions to Medicare payments to providers of up to 2% per fiscal year. The Bipartisan Budget Act of 2018 retained the federal budget "sequestration" Medicare payment reductions of 2%, and extended it through 2027. The American Taxpayer Relief Act of 2012, further reduced Medicare payments to several categories of healthcare providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These and other healthcare reform initiatives may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on our financial operations. We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could further limit the prices we are able to charge, or the amounts of reimbursement available, for our product candidates once they are approved. The Bipartisan Budget Act also extended Manufacturer responsibility for prescription costs in the Medicare Part D coverage gap to biosimilars, which had previously been exempt.

The Foreign Corrupt Practices Act

The Foreign Corrupt Practices Act, or FCPA, prohibits any U.S. individual or business from paying, offering, or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party, or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations. Activities that violate the FCPA, even if they occur wholly outside the United States, can result in criminal and civil fines, imprisonment, disgorgement, oversight, and suspension and debarment from government contracts, and refusal of orders under existing government contracts.

Other foreign anti-corruption regimes are arguably of wider application. For instance, the U.K. Bribery Act 2010 applies to dealings with any decision maker whether in the private or public sector in a position of trust.

Facilities

Our current corporate headquarters are located in Woburn, Massachusetts. We lease this facility, which consists of approximately 4,000 square feet. Our Woburn lease expires in March 2021. We also lease an approximately 12,000 square-foot facility in Oxfordshire, United Kingdom, containing research and development, laboratory and office space. This lease expires in April 2026 and we have the right to terminate it in April 2021.

On June 22, 2018, we signed a lease for an approximately 63,000 square-foot facility in Framingham, Massachusetts to house our manufacturing operations and our translational science laboratory. We expect that the facility will be ready to produce clinical-grade material during the first half of 2020 and ultimately to be able to support commercial product launch. Pursuant to the lease agreement, the lease term is estimated to commence in November 2018 subject to the landlord completing certain agreed upon landlord improvements. The rent commencement date is estimated to be eight months after the commencement of

the lease term. The initial lease term is ten years from the rent commencement date and includes two optional five year extensions.

We believe that our existing and planned facilities will be adequate to meet our planned needs and that our leases can be renewed, or suitable alternative spaces will be available in the future, on commercially reasonable terms.

Employees

As of July 9, 2018, we had 44 employees, including eight who hold Ph.D. or M.D. degrees. We had 28 employees engaged in research and development; our remaining employees are management or administrative staff. None of our employees is subject to a collective bargaining agreement. We believe that we have good relations with our employees.

Research and development

Our research and development expenses were approximately $6.9 million and $13.5 million for the years ended March 31, 2017 and 2018, respectively.

Legal proceedings

We are not currently a party to any material legal proceedings.

Management

Executive officers and directors

The following table sets forth the names and positions of our executive officers and directors, and their ages as of July 9, 2018:

Name	Age	Position(s)
Executive Officers:		
Robert Coffin, Ph.D.	53	President, Chief Executive Officer and Director
Philip Astley-Sparke	46	Executive Chairman, Secretary, Treasurer and Director
Colin Love, Ph.D.	60	Chief Operating Officer
Pamela Esposito, Ph.D.	44	Chief Business Officer
Howard Kaufman, M.D.	57	Chief Medical Officer
Non-Management Directors:		
Kapil Dhingra M.B.B.S.[(1)(2)]	58	Director
Hyam Levitsky, M.D.	60	Director
Jason Rhodes[(2)(3)]	48	Director
Joseph Slattery[(1)(2)]	53	Director
Sander Slootweg[(1)]	49	Director
Otello Stampacchia, Ph.D.[(3)]	49	Director
Dieter Weinand	57	Director

(1) Member of the audit committee.

(2) Member of the compensation committee.

(3) Member of the nominating and corporate governance committee.

Biographies

Dr. Robert Coffin is one of our co-founders and has served as our President and Chief Executive Officer since our formation in 2015. From 2013 to 2015, Dr. Coffin served as a consultant for a number of biotechnology companies. From 2011 to 2013, Dr. Coffin served as Vice President of Global Development at Amgen. In 1999, Dr. Coffin co-founded BioVex, a spin out from his research group at University College London. Dr. Coffin served as the Chief Technology Officer of BioVex until it was acquired by Amgen in 2011. During his time at BioVex, Dr. Coffin invented all BioVex products and oversaw all research and clinical development, including bringing T-Vec into two pivotal Phase 3 clinical trials. Dr. Coffin was awarded a Ph.D. in Virology from Imperial College London prior to his move to University College London in 1991. Dr. Coffin is qualified to serve on our board of directors due to his prior experience developing an oncolytic immunotherapy and his extensive knowledge of our company based on his role as co-founder and President and Chief Executive Officer.

Philip Astley-Sparke is one of our co-founders and has served as our Executive Chairman since our formation in 2015. Since 2016, Mr. Astley-Sparke has served as Chairman of uniQure N.V., a Nasdaq—listed gene therapy company. From 2013 to 2015, Mr. Astley-Sparke served as uniQure N.V.'s President of U.S. operations, where he established its U.S. infrastructure. Mr. Astley-Sparke served as Vice President and General Manager at Amgen until December 2011, following Amgen's acquisition of BioVex in March 2011. Mr. Astley-Sparke was President and Chief Executive Officer of BioVex. Prior to BioVex, Mr. Astley-Sparke was a healthcare investment banker at Chase H&Q and qualified as a Chartered Accountant with Arthur Andersen LLP. Mr. Astley-Sparke has been a Venture Partner at Forbion Capital Partners, a venture capital fund, since May 2012 and serves as Chairman of the Board of Oxyrane Limited, a biotechnology company. Mr. Astley-Sparke received a B.Sc. in Cellular and Molecular Pathology from Bristol University. Mr. Astley-

Sparke is qualified to serve on our board of directors because of his extensive knowledge of our company based on his role as co-founder and Executive Chairman and his extensive financial and leadership experience.

Dr. Colin Love has served as our Chief Operating Officer since October 2015 and has been a member of the board of directors of Replimune Limited since July 2017. Following the acquisition of BioVex by Amgen in 2011, Dr. Love remained at Amgen as Vice President of Clinical Operations, working on T-Vec until it was approved in 2015. Since 2014, Dr. Love has also provided consulting support to biotechnology companies through Clove Consulting Ltd. From 2000 until it was acquired in 2011, Dr. Love served as Senior Vice President of Product Development at BioVex. Dr. Love received a B.Sc. in Biochemistry and a Ph.D. in Biochemistry from Glasgow University.

Dr. Pamela Esposito has served as our Chief Business Officer since November 2015. Previously, she was Chief Business Officer at Ra Pharmaceuticals, Inc., or Ra, from 2013 to 2015. As a member of Ra's senior management team, Dr. Esposito played a leadership role in strategy, helping Ra transform from a discovery platform to a clinical-stage company. Prior to Ra, from 2010 to 2011, she was Vice President of Business Development at BioVex. Dr. Esposito earned a Ph.D. in Pharmacology from Tufts University School of Medicine in 2002 and a B.A. in Biochemistry/Molecular Biology from Dartmouth College.

Dr. Howard L. Kaufman joined us as Chief Medical Officer in September 2017. He has been the Editor-In-Chief of the Journal of Targeted Therapies in Cancer and a Senior Associate Editor at the Journal of Translational Medicine since 2007. Most recently, Dr. Kaufman was Associate Director for Clinical Science of the Rutgers Cancer Institute of New Jersey from 2014 to 2017. He previously was a leading academic in the study of tumor immunotherapy and the optimization of viral vectors for the treatment of cancer from 1997 to 2017. He was President of the Society for Immunotherapy of Cancer from 2014 to 2016. He previously was the Cancer Center Director and Associate Dean of Rush University Medical Center from 2009 to 2013. Dr. Kaufman has published over 400 peer-reviewed scientific papers, books, and review articles and serves on the editorial board of the Journal for Immunotherapy of Cancer. Dr. Kaufman received his Medical Degree from Loyola University in 1986, completed General Surgery residency at Boston University and fellowship training in Tumor Immunology and Surgical Oncology at the National Cancer institute.

Dr. Kapil Dhingra has been a member of our board of directors since July 2017. Dr. Dhingra currently serves as the Managing Member of KAPital Consulting, LLC, a healthcare consulting firm that he founded in 2008. Dr. Dhingra also currently serves on the boards of directors of Median Technologies Inc., Five Prime Therapeutics Inc., and Autolus Therapeutics plc, a Nasdaq-listed biopharmaceutical company. Dr. Dhingra previously served as a member of the board of directors of Micromet, Inc., until its acquisition by Amgen, and YM Biosciences Inc., until its acquisition by Gilead Sciences, Inc. From 1999 to 2008, Dr. Dhingra worked at Roche where he served as Vice President, Head of the Oncology Disease Biology Leadership Team and Head of Oncology Clinical Development. From 2000 to 2008, he held a Clinical Affiliate appointment at Memorial Sloan Kettering Cancer Center. From 1996 to 1999, Dr. Dhingra worked at Eli Lilly & Co., or Eli Lilly, where he served as Senior Clinical Research Physician. Dr. Dhingra also served as a Clinical Associate Professor of Medicine at the Indiana University School of Medicine from 1997 to 1999. Prior to Eli Lilly, Dr. Dhingra was a member of the faculty of M.D. Anderson Cancer Center from 1989 to 1996. Dr. Dhingra received his M.B.B.S. from the All India Institute of Medical Sciences in New Delhi, India. He completed his residency in Internal Medicine at Lincoln Medical and Mental Health Center and New York Medical College and completed his fellowship in Hematology and Oncology at Emory University School of Medicine. Dr. Dhingra is qualified to serve on our board of directors due to his significant experience as a healthcare consultant and as a senior officer of Roche and Eli Lilly.

Dr. Hyam Levitsky has been a member of our board of directors since May 2018. Dr. Levitsky is currently an Adjunct Professor of Oncology, Medicine, and Urology at The Johns Hopkins University School of Medicine and the Sidney Kimmel Comprehensive Cancer Center in Baltimore, MD where he began as an Assistant Professor of Oncology in 1991, rose to be a Professor in 2002, and has been an Adjunct Professor since 2011. At Johns Hopkins, Dr. Levitsky served as Scientific Director of the George Santos Bone Marrow Transplant Program from 2005 to 2011. He is a founding member of the Executive Council of the Cancer Immunotherapy Consortium of the Cancer Research Institute where he has served since 2005. Dr. Levitsky is an active member of the American Association of Cancer Research and the American Society of Hematology, and advises the FDA on cancer immunotherapy issues. Previously, Dr. Levitsky served as Executive Vice President and Chief Scientific Officer at Juno Therapeutics, Inc. from 2015 to 2018 and was Head of Cancer Immunotherapy Experimental Medicine at Roche from 2011 to 2015. He served on the External Scientific Advisory Board of the Pasteur Institute's Center for Human Immunology from 2008 to 2010. Dr. Levitsky holds a number of honors including being named a Stohlman Scholar by the Leukemia and Lymphoma Society in 2002, and was elected as a member of the American Society for Clinical Investigation in 2002. He was previously an Assistant Chief of Service from 1987 to 1988 and Senior Clinical Fellow from 1988 to 1991 at The Johns Hopkins Hospital and The Johns Hopkins Oncology Center, respectively. Dr. Levitsky received a B.S. from the University of Pennsylvania School of Engineering and Applied Science in 1980 and an M.D. from The Johns Hopkins School of Medicine in 1984. Dr. Levitsky is qualified to serve on our board of directors because of his experience in management roles at life sciences companies and extensive academic and professional background in the fields of oncology and immunology.

Mr. Jason Rhodes has been a member of our board of directors since September 2015 and a Partner at Atlas Ventures since 2014. He has been a Founder and Chairman of Generation Bio, Co. since 2016 and a Founder, Chairman and currently acting Chief Executive Officer of Disarm Therapeutics, Inc. since 2016. He has been a member of the board of directors of Gemini Therapeutics, Inc. since 2016, Accent Therapeutics, Inc. since 2017, and Bicycle Therapeutics Limited since 2015. From 2010 to 2014, Mr. Rhodes was at Epizyme, Inc., where he most recently served as President and Chief Financial Officer. He led business development at Alnylam from 2007 to 2010. Mr. Rhodes obtained a B.A. from Yale University in 1991 and an M.B.A. from the Wharton School of the University of Pennsylvania in 1996. Mr. Rhodes is qualified to serve on our board of directors based on his extensive leadership experience, his biotechnology company board experience and his experience investing in life science companies.

Mr. Joseph Slattery has been a member of our board of directors since October 2017. He has served as Executive Vice President and Chief Financial Officer of TransEnterix, Inc. since 2013. From 2010 to 2013, Mr. Slattery served as Executive Vice President and Chief Financial Officer at Baxano Surgical Inc. Previously, from 1996 to 2007, among other roles, he served as Chief Financial Officer and Senior Vice President of Finance and Information Systems of Digene Corp., which was acquired by Qiagen, N.V. Mr. Slattery has also been a member of the boards of directors of Exosome Diagnostics, Inc. since 2013, CVRx Inc. since 2008, and Micromet, Inc. from 2007 to 2012, when it was acquired by Amgen. He earned his Bachelor's Degree in Accountancy from Bentley University in 1987 and is a certified public accountant. Mr. Slattery is qualified to serve on our board of directors based on his experience in public accounting and financial expertise.

Mr. Sander Slootweg has been a member of our board of directors since 2015. Mr. Slootweg co-founded Forbion Capital Partners in 2006 and has served as one of its Managing Partners since that time. Mr. Slootweg has served on the boards of Forbion's portfolio companies, NorthSea Therapeutics, Inc., since 2017, Oxyrane Limited since 2011 and Xention Discovery Ltd. and Ario Pharma Ltd. since 2006. Mr. Slootweg served on the boards of uniQure N.V. from 2012 to 2014, Fovea Pharmaceutics S.A. from

2007 until its sale to Sanofi S.A. in 2009, Argenta Discovery Ltd. from 2001 until its sale to Galapagos N.V. in 2010, BioVex from 2003 until its sale to Amgen in 2011, Alantos Pharmaceuticals, Inc. from 2005 to until its sale to Amgen in 2007, Impella Cardiosystems AG from 2001 to 2003 until its sale to Abiomed, Inc. in 2005, and Glycart AG from 2003 until its sale to F. Hoffmann-La Roche & Co., or Roche, in 2005. Mr. Slootweg has also acted as the Chairman of the Board of AMT N.V., Belgium from 2006 to 2012 and as the Chairman of the Board of Dezima Pharma B.V. from 2012 until its sale to Amgen in 2015. Before co-founding Forbion, he was an Investment Director at ABN AMRO Capital Life Sciences from 1999 to 2006. Mr. Slootweg holds degrees in Business and Financial Economics from the Free University of Amsterdam and Business Administration from Nijenrode University, The Netherlands. Mr. Slootweg is qualified to serve on our board of directors because of his extensive leadership experience, his biotechnology company board experience and his experience investing in life science companies.

Dr. Otello Stampacchia has been a member of our board of directors since May 2015. Since 2006, Dr. Stampacchia has been a managing member at Omega Fund Management. Previously, Dr. Stampacchia was in charge of life sciences direct investments at AlpInvest Partners B.V. from 2001 to 2003. Before AlpInvest Partners B.V., from 2000 to 2001, Dr. Stampacchia was the portfolio manager of the Lombard Odier Immunology Fund. Previously, Dr. Stampacchia was a member of the healthcare corporate finance and mergers and acquisitions team at Goldman Sachs Group, Inc. from 1997 to 2000. Before joining Goldman Sachs Group, Inc., Dr. Stampacchia helped co-found the healthcare investment activities at Index Securities, now Index Ventures, Inc. Dr. Stampacchia is currently a member of the boards of directors of Median Technologies S.A., Trevi Therapeutics, Inc., and Gossamer Bio, Inc. and has served in such roles since 2014, 2017, and 2018, respectively. Dr. Stampacchia received a Ph.D. in Molecular Biology from the University of Geneva, Switzerland in 1997, and a Ph.D. in Biotechnology in 1998. Mr. Stampacchia is qualified to serve on our board of directors because of his extensive leadership experience, his biotechnology company board experience and his experience investing in life science companies.

Mr. Dieter Weinand has been a member of our board of directors since June 2018. Since 2014, Mr. Weinand has been President, Pharmaceutical Division at Bayer AG. From 2013 to 2014 Mr. Weinand was President, Global Commercialization at Otsuka Pharmaceutical Co., Ltd. and from 2010 to 2013 Mr. Weinand was President, Primary Care and Asia-Pacific Region at Pfizer Inc. From 2001 to 2010, Mr. Weinand served as President, Senior Vice President, and Vice President of BMS. Prior to joining BMS, Mr. Weinand was Senior Vice President at F.H. Faulding, Inc. from 2000 to 2001, Managing Director, Director, Vice President, and Senior Director at Warner-Lambert Company, which was acquired by Pfizer Inc. in 2000, during the period from 1994 to 2000, Vice President at Pharmos Corporation during 1994, and Director, Area Business Operations Coordinator, and International Product Manager at Lederle International during the period from 1990 to 1994. Mr. Weinand has been a member the board of directors of Bayer AG since 2013 and was previously a member of the board of directors of HealthPrize Technologies LLC from 2014 to 2018. Mr. Weinand received a M.S. in Pharmacology and Toxicology from Long Island University in 1987 and a B.A. from Concordia College in 1982. Mr. Weinand is qualified to serve on our board of directors because of his extensive leadership experience, his biotechnology company board experience and his experience in management roles at life sciences companies.

Composition of our board of directors

Our board of directors currently consists of nine directors, each of whom serves pursuant to the board composition provisions of our amended and restated voting agreement which is described under "Certain relationships and related party transactions." These board composition provisions will terminate upon the completion of this offering. Upon the termination of these provisions, there will be no further contractual

obligations regarding the election of our directors. Our nominating and corporate governance committee and our board of directors may therefore consider a broad range of factors relating to the qualifications and background of nominees, which may include diversity, which is not only limited to race, gender or national origin. We have no formal policy regarding board diversity. Our nominating and corporate governance committee's and our board of directors' priority in selecting board members is identification of persons who will further the interests of our stockholders through their established record of professional accomplishment, the ability to contribute positively to the collaborative culture among board members, knowledge of our business, understanding of the competitive landscape and professional and personal experiences and expertise relevant to our growth strategy. Our directors hold office until their successors have been elected and qualified or until the earlier of their resignation or removal.

We anticipate that our board of directors will consist of nine members upon the effectiveness of the registration statement of which this prospectus forms a part. Our board of directors has determined that Mr. Rhodes, Mr. Slootweg, Dr. Stampacchia, Dr. Dhingra, Mr. Slattery, Mr. Weinand and Dr. Levitsky are independent, including for purposes of the rules of Nasdaq and relevant federal securities laws and regulations. Nasdaq independence definition includes a series of objective tests, including that a director is not, and has not been for at least three years, one of our employees and that neither a director nor any of his family members has engaged in various types of business dealings with us. In addition, as required by Nasdaq rules, our board of directors has made a subjective determination as to each independent director that no relationships exist, which, in the opinion of our board of directors, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In making these determinations, our board of directors reviewed and discussed information provided by the directors and us with regard to each director's business and personal activities and relationships as they may relate to us and our management. There are no family relationships among any of our directors or executive officers.

Our amended and restated certificate of incorporation and amended and restated bylaws that will become effective immediately prior to the completion of this offering will provide that our board of directors will be divided into three classes, Class I, Class II and Class III, with members of each class serving staggered three-year terms. Upon the completion of this offering, the members of the classes will be divided as follows

- our Class I directors will be Mr. Astley-Sparke, Dr. Dhingra, and Mr. Slattery, and their terms will expire at the annual meeting of stockholders to be held in 2019;
- our Class II directors will be Mr. Rhodes, Mr. Slootweg, and Dr. Stampacchia, and their terms will expire at the annual meeting of stockholders to be held in 2020; and
- our Class III directors will be Dr. Coffin, Dr. Levitsky and Mr. Weinand, and their terms will expire at the annual meeting of stockholders to be held in 2021.

Upon the expiration of the term of a class of directors, directors in that class will be eligible to be elected for a new three-year term at the annual meeting of stockholders in the year in which their term expires.

Board committees

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee, each of which will operate pursuant to a charter to be adopted by our board of directors and to be effective upon the effectiveness of the registration statement of which this prospectus is a part. Upon the effectiveness of the registration statement of which this prospectus is a

part, the composition and functioning of all of our committees will comply with all applicable requirements of the Sarbanes-Oxley Act, Nasdaq and the SEC rules and regulations. The initial composition and responsibilities of each committee are described below. Members will serve on these committees until their resignation or until otherwise determined.

Audit committee

Our audit committee provides oversight of our accounting and financial reporting process, the audit of our financial statements and our internal control function. Among other matters, the audit committee will be responsible for the following:

- assisting the board of directors in oversight of the independent auditors' qualifications, independence and performance;
- the engagement, retention and compensation of the independent auditors;
- reviewing the scope of the annual audit and reviewing and discussing with management and the independent auditors the results of the annual audit and the review of our quarterly financial statements, including the disclosures in our annual and quarterly reports filed with the SEC;
- reviewing our risk assessment and risk management processes;
- reviewing policies and procedures with respect to our related party transactions policy;
- conducting an annual self-evaluation process;
- establishing procedures for receiving, retaining and investigating complaints received by us regarding accounting, internal accounting controls or audit matters; and
- approving audit and permissible non-audit services provided by our independent auditor.

Effective upon the effectiveness of the registration statement of which this prospectus is a part, the members of our audit committee will be Kapil Dhingra, Sander Slootweg and Joseph Slattery, who will serve as the chair of the committee. All members of our audit committee meet the requirements for financial literacy under the applicable rules and regulations of the SEC and Nasdaq. Our board of directors has determined that Joseph Slattery is an audit committee financial expert as defined under the applicable rules of the SEC and has the requisite financial sophistication as defined under the applicable rules and regulations of Nasdaq. Dr. Dhingra and Mr. Slattery, members of our audit committee, are independent directors as defined under the applicable rules and regulations of the SEC and Nasdaq. Within twelve months of the completion of this offering, we expect Mr. Weinand to replace Mr. Slootweg as a member of the audit committee, at which time all of the members of our audit committee will be independent directors as defined under the applicable rules and regulations of the SEC and Nasdaq.

Compensation committee

Our compensation committee will adopt and administer the compensation policies, plans and benefit programs for our executive officers and all other members of our executive team. Our compensation committee will also be responsible for making recommendations regarding non-employee director compensation to the full board of directors. In addition, among other things, our compensation committee will evaluate annually, in consultation with the board of directors, the performance of our chief executive officer, review and approve corporate goals and objectives relevant to compensation of our chief executive officer and other executives and evaluate the performance of these executives in light of those goals and

objectives. Our compensation committee will also adopt and administer our equity compensation plans. Jason Rhodes, Joseph Slattery and Kapil Dhingra will serve on the compensation committee, which will be chaired by Kapil Dhingra. All of the members of our compensation committee are independent under the applicable rules and regulations of the SEC and Nasdaq.

Nominating and corporate governance committee

Our nominating and corporate governance committee will be responsible for, among other things, making recommendations regarding corporate governance, the composition of our board of directors, the identification, evaluation and nomination of director candidates and the structure and composition of committees of our board of directors. In addition, our nominating and corporate governance committee will oversee our corporate governance guidelines, approve our committee charters, oversee compliance with our code of business conduct and ethics and contribute to succession planning. Jason Rhodes, Otello Stampacchia and Hyam Levitsky will serve on the nominating and corporate governance committee, which will be chaired by Jason Rhodes. All of the members of our nominating and corporate governance committee are independent under the applicable rules and regulations of Nasdaq.

Compensation committee interlocks and insider participation

None of the members of our compensation committee is or has at any time during the past year been one of our officers or employees. None of our executive officers currently serves or in the past year has served as a member of our board of directors or compensation committee of any entity that has one or more executive officers serving on our board of directors or compensation committee.

Board observer rights

We are a party to an amended and restated investors' rights agreement with certain of our investors. Under this agreement, Bain Capital Life Science Fund, L.P. has the right to appoint one person to attend board and committee meetings from time to time in a nonvoting observer capacity. Certain provisions of the amended and restated investors' rights agreement, including the board observer right described above, will terminate immediately prior to the completion of the offering. See "Certain relationships and related party transactions" for further information concerning the amended and restated investors' rights agreement.

Role of the board in risk oversight

Risk is inherent with every business, and how well a business manages risk can ultimately determine its success. We face a number of risks, including risks relating to our financial condition, development and commercialization activities, operations, strategic direction and intellectual property, in each case as more fully discussed under "Risk factors" in this prospectus. Management is responsible for the day-to-day management of the risks we face, while our board of directors, as a whole and through committees, has responsibility for the oversight of risk management. Our board of directors performs this oversight role by using several different levels of review. In connection with its reviews of the operations and corporate functions of our company, our board of directors addresses the primary risks associated with those operations and corporate functions. In addition, our board of directors reviews the risks associated with our company's business strategies periodically throughout the year as part of its consideration of undertaking any such business strategies.

Mr. Astley-Sparke serves as executive chairman of our board of directors. The role of the board of directors in overseeing the management of our risks is conducted primarily through committees of the

board of directors, as disclosed in the descriptions of each of the committees above and in the charters of each such committee. The full board of directors (or the appropriate board committee in the case of risks that are under the purview of a particular committee) discusses with management our major risk exposures, the potential impact on us, and the steps we take to manage them. When a board committee is responsible for evaluating and overseeing the management of a particular risk or risks, the chairperson of the relevant committee reports on the discussion to the full board of directors during the committee reports portion of the next board meeting. This enables the board of directors and its committees to coordinate the risk oversight role, particularly with respect to risk interrelationships.

Code of business conduct and ethics

Prior to the effectiveness of the registration statement of which this prospectus is a part, we will adopt a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. Following the effectiveness of the registration statement of which this prospectus is a part, a current copy of the code will be posted on the Corporate Governance section of our website, which is located at https://ir.replimune.com/corporate-governance/governance-documents. If we make any substantive amendments to, or grant any waivers from, the code of business conduct and ethics for any officer or director, we will disclose the nature of such amendment or waiver on our website or in a current report on Form 8-K. We do not incorporate the information on or accessible through our website into this prospectus, and you should not consider any information on, or that can be accessed through, our website as part of this prospectus.

Executive and director compensation

The compensation of our chief executive officer and our other executive officers identified in the summary compensation table below, who we refer to as the named executive officers, has consisted of a combination of base salary, bonuses and long-term incentive compensation in the form of stock options. In preparing to become a public company, we have begun a thorough review of all elements of the compensation of our executives, including our compensation philosophy and the function and design of our long-term incentive compensation programs. We have begun and expect to continue to evaluate the existing executive compensation program to ensure our program is competitive with the companies with which we compete for executive talent and is appropriate for a public company.

Summary compensation table

The following table presents compensation awarded, paid to or accrued for our named executive officers for services rendered during our fiscal year 2018.

Name & Principal Position	Year	Salary ($)	Bonus ($)[1]	Option awards ($)[2]	All Other compensation ($)	Total ($)
Robert Coffin, Ph.D. *President, Chief Executive Officer and Director*	2018	$ 389,478	$ 146,817	$ 592,000	$ —	$ 1,128,295
Colin Love, Ph.D. *Chief Operating Officer*	2018	$ 311,834[3]	$ 101,784[3]	$ 277,500	$ —	$ 691,118
Pamela Esposito, Ph.D. *Chief Business Officer*	2018	$ 264,633	$ 86,815	$ 249,750	$ —	$ 601,198
Philip Astley-Sparke *Executive Chairman, Secretary, Treasurer and Director*	2018	$ 254,687	$ 83,765	$ 166,500	$ —	$ 504,952

(1) The amounts reported in this column represent bonuses based upon the achievement of company and individual performance objectives for the year ended March 31, 2018, which we paid in April 2018.

(2) The amounts reported in this column reflect the full grant date fair value for awards granted during fiscal year 2018. The grant date fair value was computed in accordance with Accounting Standards Codification Topic 718, Compensation—Stock Compensation. The assumptions we used in valuing options are described in Note 10 to our audited consolidated financial statements appearing at the end of this prospectus.

(3) Amounts presented for Dr. Love are based on an assumed conversion ratio of British pounds to dollars of 1.4015, which was the exchange rate in effect as of March 31, 2018.

Narrative disclosure to summary compensation table

Employment arrangements

Set forth below are descriptions of the employment agreements that we have entered into with each of our named executive officers, including descriptions of our named executive officers' base salary, target annual bonus opportunity and standard benefit plan participation.

Robert Coffin

Effective as of October 1, 2015, Replimune, Inc. entered into an employment agreement with Dr. Coffin for the position of Chief Executive Officer of Replimune. Dr. Coffin currently receives an annual base salary of approximately $500,000. In addition, pursuant to his employment agreement, Dr. Coffin is eligible for annual performance bonuses. Dr. Coffin's annual target bonus is currently up to 50% of his annual base

salary. Dr. Coffin is eligible to participate in our employee benefit plans, practices and programs on a basis which is no less favorable than is provided to our other similarly situated executives.

Dr. Coffin's employment agreement further provides that in the event his employment is terminated without "cause," as defined in his employment agreement, or he terminates his employment for "good reason," as defined in his employment agreement, and subject to customary conditions, including his execution of an acceptable release, Dr. Coffin is entitled to receive 12 months of base salary and monthly cash payments equal to the costs of COBRA health continuation for the earlier of six months or until Dr. Coffin becomes eligible under another employer's group coverage.

In addition, in the event of a change in control of our business, if, within 24 months following such change of control, Dr. Coffin is terminated without "cause" or he has terminated his employment for "good reason," Dr. Coffin will be entitled to receive any accrued but unpaid compensation, together with a lump sum payment equal to the sum of Dr. Coffin's then current base salary or, if greater, the base salary for the year immediately preceding, subject to customary conditions, including his execution of an acceptable release. If an excise tax under Section 4999 of the Code is imposed on the payments and benefits payable to Dr. Coffin in connection with a change in control, Dr. Coffin will be entitled to a tax gross-up payment for such excise taxes.

Colin Love

Effective as of September 16, 2015, Replimune Limited entered into an employment agreement with Dr. Love for the position of Chief Operating Officer of Replimune. Dr. Love currently receives an annual base salary of approximately $335,000. In addition, pursuant to his employment agreement, Dr. Love is eligible for annual performance bonuses. Dr. Love's annual target bonus is currently up to 35% of his annual base salary. Dr. Love is eligible to participate in our employee benefit plans, practices and programs.

Dr. Love's employment agreement further provides that in the event he is terminated, Dr. Love may be entitled to receive payment in lieu of receiving six months' notice of termination in an amount equal to his basic annual salary, as at the date of termination, which he would have been entitled to receive during the six month notice period less income tax and National Insurance contributions, and subject to customary conditions, the "payment in lieu".

Dr. Love's employment agreement further provides that in the event his employment is terminated without "cause," as defined in his employment agreement, or he terminates his employment for "good reason," as defined in his employment agreement, Dr. Love is entitled to be paid a sum equal to twelve months of his "fixed annual salary," as defined in his employment agreement, less any "payment in lieu," payable in twelve equal monthly installments following his termination.

In addition, in the event of a change in control of our business, if, within twenty-four months following such change in control, Dr. Love is terminated without "cause" or he has terminated his employment for "good reason," Dr. Love will be entitled to receive a sum equal to twelve months of his "fixed annual salary," less any "payment in lieu," payable within thirty days following his termination.

Pamela Esposito

Effective as of November 1, 2015, Replimune, Inc. entered into an employment agreement with Dr. Esposito for the position of Chief Business Officer of Replimune. Dr. Esposito currently receives an annual base salary of approximately $350,000. In addition, pursuant to her employment agreement, Dr. Esposito is eligible for annual performance bonuses. Dr. Esposito's annual target bonus is currently up to 35% of her

annual base salary. Dr. Esposito is eligible to participate in our employee benefit plans, practices and programs on a basis which is no less favorable than is provided to our other similarly situated executives.

Dr. Esposito's employment agreement further provides that in the event her employment is terminated without "cause," as defined in her employment agreement, or she terminates her employment for "good reason," as defined in her employment agreement, and subject to customary conditions, including her execution of an acceptable release, Dr. Esposito is entitled to receive six months of base salary and monthly cash payments equal to the costs of COBRA health continuation for the earlier of six months or until Dr. Esposito becomes eligible under another employer's group coverage.

In addition, in the event of a change in control of our business, if, within twenty-four months following such change of control, Dr. Esposito is terminated without "cause" or she has terminated her employment for "good reason," Dr. Esposito will be entitled to receive any accrued but unpaid compensation, together with a lump sum payment equal to the sum of the Dr. Esposito's then current base salary or, if greater, the base salary for the year immediately preceding, and one hundred percent of her annual bonus, subject to customary conditions, including her execution of an acceptable release. If an excise tax under Section 4999 of the Code is imposed on the payments and benefits payable to Dr. Esposito in connection with a change in control, Dr. Esposito will be entitled to a tax gross-up payment for such excise taxes.

Philip Astley-Sparke

Effective as of October 1, 2015, Replimune, Inc. entered into an employment agreement with Mr. Astley-Sparke for the position of Executive Chairman of Replimune. Mr. Astley-Sparke currently spends 80% of his time working for Replimune and receives an annual base salary of approximately $400,000. In addition, pursuant to his employment agreement, Mr. Astley-Sparke is eligible for annual performance bonuses. Mr. Astley-Sparke's annual target bonus is currently up to 50% of his annual base salary. Mr. Astley-Sparke is eligible to participate in our employee benefit plans, practices and programs on a basis which is no less favorable than is provided to our other similarly situated executives.

Mr. Astley-Sparke's employment agreement further provides that in the event his employment is terminated without "cause," as defined in his employment agreement, or he terminates his employment for "good reason," as defined in his employment agreement, and subject to customary conditions, including his execution of an acceptable release, Mr. Astley-Sparke is entitled to receive 12 months of base salary and monthly cash payments equal to the costs of COBRA health continuation for the earlier of six months or until Mr. Astley-Sparke becomes eligible under another employer's group coverage.

In addition, in the event of a change in control of our business, if, within 24 months following such change of control, Mr. Astley-Sparke is terminated without "cause" or he has terminated his employment for "good reason," Mr. Astley-Sparke will be entitled to receive any accrued but unpaid compensation, together with a lump sum payment equal to the sum of Mr. Astley-Sparke's then current base salary or, if greater, the base salary for the year immediately preceding, subject to customary conditions, including his execution of an acceptable release. If an excise tax under Section 4999 of the Code is imposed on the payments and benefits payable to Mr. Astley-Sparke in connection with a change in control, Mr. Astley-Sparke will be entitled to a tax gross-up payment for such excise taxes.

Pursuant to their employment agreements, our named executive officers are subject to standard covenants of confidentiality and nondisclosure, assignment of intellectual property work product and post-termination noncompetition and non-solicitation of employees, consultants and customers.

Bonuses

In addition to base salaries, our named executive officers are eligible to receive annual performance-based cash incentives, which are designed to motivate our executives to achieve defined annual corporate goals and to reward our executives for their contributions towards the achievement of these goals. The annual performance-based incentive each named executive officer was eligible to receive in fiscal year 2018 was generally based on the extent to which the officer achieved the corporate goals and individual objectives that our board of directors established at the beginning of fiscal year 2018. After the end of fiscal year 2018, our board of directors reviewed performance against each goal and objective and determined the extent to which each goal and objective was achieved.

In our fiscal year 2018, Dr. Coffin was eligible to receive a target bonus of up to 40% of his base salary, while each of Dr. Love, Dr. Esposito and Mr. Astley-Sparke was eligible to receive a target bonus of up to 35% of their respective base salary. Our board of directors reviewed the fiscal year 2018 corporate goals and the individual objectives of each named executive officer and determined that on an overall basis, significant progress had been made towards achieving all of those goals. In recognition of these achievements and the efforts of each executive, the committee awarded each of our named executive officers eligible for performance bonuses a portion of their target bonus opportunity for fiscal year 2018. For fiscal year 2018, Dr. Coffin, Dr. Love, Dr. Esposito and Mr. Astley-Sparke were paid bonuses of $146,817, $101,784, $86,815 and $83,756, respectively.

Pension benefits

Our named executive officers did not participate in, or otherwise receive any benefits under, any pension or retirement plan during fiscal year 2017, other than pursuant to the plans described under "—Employee benefit and stock plans—401(k) plan" or "—Employee benefit and stock plans—U.K. pension contribution plan."

Non-qualified deferred compensation

Our named executive officers did not participate in, or earn any benefits under, a non-qualified deferred compensation plan during fiscal year 2017.

Outstanding equity awards at fiscal year end

The following table sets forth information regarding outstanding equity awards held by our named executive officers as of March 31, 2018.

	Option awards				Stock awards	
Name	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable	Option exercise price ($)	Option expiration date	Number of securities that have not vested	Market value of securities that have not vested
Robert Coffin, Ph.D.	—	318,299[1]	$ 3.30	July 26, 2027	—	—
Colin Love, Ph.D.	—	149,203[1]	$ 3.30	July 26, 2027	—	—
Pamela Esposito, Ph.D.	124,332	[2] 24,871[3]	$ 1.01	November 1, 2025	—	—
	102,168	93,994[4]	$ 1.75	March 1, 2026	—	—
	—	134,281[1]	$ 3.30	July 26, 2027	—	—
Philip Astley-Sparke	—	89,521[1]	$ 3.30	July 26, 2027	—	—

[1] 25% of the shares underlying this stock option vest on July 26, 2018 and the remainder of the shares underlying this stock option vest in 36 equal monthly installments thereafter.

(2) The shares underlying this stock option vest in two equal installments of 12,433 on June 30, 2018 and September 30, 2018.

(3) The shares underlying this stock option were granted under the Replimune Limited 2015 Enterprise Management Incentive Share Option Plan, or the 2015 Plan, which was terminated in July 2017. Upon termination of the 2015 Plan, all awards issued thereunder were cancelled and replaced with awards issued under our 2017 Plan.

(4) The shares underlying this stock option vest in 23 equal monthly installments.

Employee benefit and stock plans

2018 Omnibus Incentive Compensation Plan

Purpose and types of grants

The purpose of our 2018 Plan is to attract and retain employees, non-employee directors and consultants, and advisors. Our 2018 Plan provides for the issuance of incentive stock options, non-qualified stock options, stock awards, stock units, stock appreciation rights and other stock-based awards. Our 2018 Plan is intended to provide an incentive to participants to contribute to our economic success by aligning the economic interests of participants with those of our stockholders.

Administration

Our 2018 Plan will be administered by our compensation committee, and our compensation committee will determine all of the terms and conditions applicable to grants under our 2018 Plan. Our compensation committee will also determine who will receive grants under our 2018 Plan and the number of shares of common stock that will be subject to grants. Our compensation committee may delegate authority under the 2018 Plan to one or more subcommittees as it deems appropriate. Subject to compliance with applicable law and the applicable stock exchange rules, our board of directors, in its discretion, may perform any action of our compensation committee under the 2018 Plan. Subject to compliance with applicable law and applicable stock exchange requirements, the compensation committee (or our board of directors or a subcommittee, as applicable) may delegate all or part of its authority to our chief executive officer, as it deems appropriate, with respect to grants to employees or key advisors who are not executive officers or directors under Section 16 of the Exchange Act. Our compensation committee, our board of directors, any subcommittee or the chief executive officer, as applicable, that has authority with respect to a specific grant will be referred to as "the committee" in this description of the 2018 Plan.

Shares subject to the plan

Subject to adjustment as described below, the maximum aggregate number of shares of common stock that may be issued or transferred under the 2018 Plan is 3,617,968 shares, which is equal to the sum of (i) 3,486,118 shares of our common stock, plus (ii) the number of shares of our common stock reserved for issuance under the 2017 Plan that remain available as of the effective date of the 2018 Plan (not to exceed 131,850 shares of our common stock). If any options or stock appreciation rights, including outstanding options and stock appreciation rights granted under our 2017 Plan (up to 2,520,247 shares), terminate, expire, or are canceled, forfeited, exchanged, or surrendered without having been exercised, or if any stock awards, stock units or other stock-based awards, including outstanding awards granted under our 2017 Plan, are forfeited, terminated, or otherwise not paid in full in shares of common stock, the shares of our common stock subject to such grants will again be available for purposes of our 2018 Plan. In addition, as of the first trading day of each fiscal year during the term of the 2018 Plan (excluding any extensions), an additional number of shares of our common stock equal to 4% of the total number of shares outstanding on the last trading day in the immediately preceding fiscal year (or such lesser amount as determined by our board of directors) will be added to the number of shares authorized under the 2018 Plan.

Subject to adjustment as described below, the aggregate number of shares of common stock that may be issued or transferred under the 2018 Plan pursuant to incentive stock options will not exceed the lesser of the maximum aggregate number of shares of common stock that may be issued or transferred under the Plan and 16,000,000 shares.

Shares of our common stock that are surrendered in payment of the exercise price of an option or stock appreciation right will not be available for issuance under the 2018 Plan. Shares of our common stock that are withheld in satisfaction of the withholding taxes, or surrendered for the payment of taxes, will not be available for issuance under the 2018 Plan. When stock appreciation rights are granted, the full number of shares subject to the stock appreciation rights will be considered issued under the 2018 Plan regardless of the number of shares issued upon exercise of the stock appreciation rights. If any grants are paid in cash, and not in shares of our common stock, any shares of our common stock subject to such grants will also be available for future grants. If we repurchase shares of our common stock on the open market with the proceeds from the exercise price we receive from options, the repurchased shares will not be available for issuance under the 2018 Plan. In addition, shares of our common stock issued under grants made pursuant to assumption, substitution, or exchange of previously granted awards of a company that we acquire will not reduce the number of shares of our common stock available under the 2018 Plan.

The maximum number of shares of our common stock that may be subject to options, stock appreciation rights, stock units and other stock-based awards made to employees, consultants and advisors under the 2018 Plan in any calendar year will not exceed 1,562,352 shares of our common stock in the aggregate. The maximum aggregate grant date value of shares of common stock subject to grants made to any non-employee member of our board of directors during any calendar year for services rendered as a non-employee member of our board, including any cash fees earned for services rendered as a non-employee member of our board of directors during the calendar year, will not exceed $750,000 in total value. For grants that are made to any non-employee member of our board of directors for services rendered as a non-employee member of our board of directors during the calendar year in which the non-employee member of the board of directors is first appointed to our board of directors, such grants taken together with any cash fees earned for services rendered as a non-employee member of our board of directors will not exceed $1,000,000 in total value. In determining these dollar limits, the value of grants will be calculated based on the grant date fair value of the grants for financial reporting purposes.

Adjustments

In connection with stock splits, stock dividends, recapitalizations, and certain other events affecting our common stock, the committee will make adjustments as it deems appropriate in the maximum number of shares of common stock reserved for issuance as grants; the maximum number and kind of shares for which any individual may receive grants in any year; the number and kind of shares covered by outstanding grants; the number and kind of shares that may be issued or transferred under our 2018 Plan; the price per share or market value of any outstanding grants; the exercise price of options; the base amount of stock appreciation rights; and the performance goals or other terms; and conditions as the committee deems appropriate.

Eligibility

All of our employees are eligible to receive grants under our 2018 Plan. In addition, our non-employee directors and key advisors who perform services for us are also eligible to receive grants under our 2018 Plan. The committee selects the employees, non-employee directors and key advisors who will receive grants.

Vesting

The committee determines the vesting and exercisability terms of awards granted under our 2018 Plan.

Options

Under our 2018 Plan, the committee will determine the exercise price of the options granted and may grant options to purchase shares of common stock in such amounts as it determines. The committee may grant options that are intended to qualify as incentive stock options under Section 422 of the Internal Revenue Code of 1986, as amended, or the Code, or non-qualified stock options, which are not intended to so qualify. Incentive stock options may only be granted to our employees. Anyone eligible to participate in our 2018 Plan may receive a grant of non-qualified stock options. The exercise price of a stock option granted under our 2018 Plan cannot be less than the fair market value of a share of our common stock on the date the option is granted. If an incentive stock option is granted to a 10% stockholder, the exercise price cannot be less than 110% of the fair market value of a share of our common stock on the date the option is granted. The aggregate number of shares of common stock that may be issued or transferred under the 2018 Plan pursuant to incentive stock options under Section 422 of the Code may not exceed 3,617,968 shares of common stock.

The exercise price for any option is generally payable in cash or check. In certain circumstances as permitted by the committee, the exercise price may be paid by the surrender of shares of our common stock with an aggregate fair market value on the date the option is exercised equal to the exercise price; by payment through a broker in accordance with procedures established by the Federal Reserve Board; by withholding shares of common stock subject to the exercisable option which have a fair market value on the date of exercise equal to the aggregate exercise price; or by such other method as the committee approves.

The term of an option cannot exceed ten years from the date of grant, except that if an incentive stock option is granted to a 10% stockholder, the term cannot exceed five years from the date of grant. In the event that on the last day of the term of a non-qualified stock option, the exercise is prohibited by applicable law, including a prohibition on purchases or sales of our common stock under our insider trading policy, the term of the non-qualified option will be extended for a period of 30 days following the end of the legal prohibition, unless the committee determines otherwise.

Except as provided in the grant instrument, an option may only be exercised while a participant is employed by or providing service to us. The committee will determine in the grant instrument under what circumstances and during what time periods a participant may exercise an option after termination of employment.

Stock appreciation rights

Under our 2018 Plan, the committee may grant stock appreciation rights, which may be granted separately or in tandem with any option. Stock appreciation rights granted with a non-qualified stock option may be granted either at the time the non-qualified stock option is granted or any time thereafter while the option remains outstanding. Stock appreciation rights granted with an incentive stock option may be granted only at the time the grant of the incentive stock option is made. The committee will establish the base amount of the stock appreciation right at the time the stock appreciation right is granted, which will be equal to or greater than the fair market value of a share of our common stock as of the date of grant.

If a stock appreciation right is granted in tandem with an option, the number of stock appreciation rights that are exercisable during a specified period will not exceed the number of shares of our common stock

that the participant may purchase upon exercising the related option during such period. Upon exercising the related option, the related stock appreciation rights will terminate, and upon the exercise of a stock appreciation right, the related option will terminate to the extent of an equal number of shares of our common stock. Generally, stock appreciation rights may only be exercised while the participant is employed by, or providing services to, us. When a participant exercises a stock appreciation right, the participant will receive the excess of the fair market value of the underlying common stock over the base amount of the stock appreciation right. The appreciation of a stock appreciation right will be paid in shares of our common stock, cash or both.

The term of a stock appreciation right cannot exceed ten years from the date of grant. In the event that on the last day of the term of a stock appreciation right, the exercise is prohibited by applicable law, including a prohibition on purchases or sales of our common A stock under our insider trading policy, the term of the stock appreciation right will be extended for a period of 30 days following the end of the legal prohibition, unless the committee determines otherwise.

Stock awards

Under our 2018 Plan, the committee may grant stock awards. A stock award is an award of our common stock that may be subject to restrictions as the committee determines. The restrictions, if any, may lapse over a specified period of employment or based on the satisfaction of pre-established criteria, in installments or otherwise, as the committee may determine. Except to the extent restricted under the grant instrument relating to the stock award, a participant will have all of the rights of a stockholder as to those shares, including the right to vote and the right to receive dividends or distributions on the shares. Dividends with respect to stock awards that vest based on performance shall vest if and to the extent that the underlying stock award vests, as determined by the committee. All unvested stock awards are forfeited if the participant's employment or service is terminated for any reason, unless the committee determines otherwise.

Stock units

Under our 2018 Plan, the committee may grant restricted stock units to anyone eligible to participate in our 2018 Plan. Restricted stock units are phantom units that represent shares of our common stock. Stock units become payable on terms and conditions determined by the committee and will be payable in cash or shares of our stock as determined by the committee. All unvested restricted stock units are forfeited if the participant's employment or service is terminated for any reason, unless the committee determines otherwise.

Other stock-based awards

Under our 2018 Plan, the committee may grant other types of awards that are based on, measured by, or payable to, anyone eligible to participate in our 2018 Plan in shares of our common stock. The committee will determine the terms and conditions of such awards. Other stock-based awards may be payable in cash, shares of our common stock, or a combination of the two.

Dividend equivalents

Under our 2018 Plan, the committee may grant dividend equivalents in connection with grants of stock units or other stock-based awards made under our 2018 Plan. Dividend equivalents entitle the participant to receive amounts equal to ordinary dividends that are paid on the shares underlying a grant while the grant is outstanding. The committee will determine whether dividend equivalents will be paid currently or accrued as contingent cash obligations. Dividend equivalents may be paid in cash, in shares of common

stock, or in a combination of the two. The committee will determine the terms and conditions of the dividend equivalent grants, including whether the grants are payable upon the achievement of specific performance goals. Dividend equivalents with respect to stock units or other stock-based awards that vest based on performance shall vest and be paid only if and to the extent that the underlying stock units or other stock-based awards vest and are paid as determined by the committee. No dividends or dividend equivalents will be granted in connection with stock options or stock appreciation rights.

Change of control

If we experience a change of control where we are not the surviving corporation (or survive only as a subsidiary of another corporation), all outstanding grants that are not exercised or paid at the time of the change of control will be assumed by, or replaced with grants that have comparable terms by, the surviving corporation (or a parent or subsidiary of the surviving corporation). If the surviving corporation does not assume or replace the outstanding grants with grants that have comparable terms, outstanding stock options and stock appreciation rights will automatically accelerate and become fully exercisable and the restrictions and conditions on outstanding stock awards, stock units, other stock-based awards and dividend equivalents will immediately lapse. However, if the vesting of such grants is based on performance (in whole or in part), the vesting terms applicable to such grants will be determined under the applicable grant instrument.

If the outstanding grants are assumed, or replaced with grants that have comparable terms by, the surviving corporation (or parent or subsidiary of the surviving corporation) and if the participant's employment or service is terminated without cause or by the participant for good reason (if applicable) upon or within 12 months following the change of control, the participant's outstanding grants shall become fully vested as of the date of such termination; provided that if the vesting of any such grants is based on performance (in whole or in part), the vesting terms applicable to such grants will be determined under the applicable grant instrument. The committee may provide for more beneficial vesting terms upon a termination of employment or service in connection with the change of control, as set forth in the applicable grant instrument or otherwise.

If there is a change of control and all outstanding grants are not assumed by, or replaced with grants that have comparable terms by, the surviving corporation, the committee may take any of the following action without the consent of any participant:

- pay participants, in an amount and form determined by the committee, in settlement of outstanding stock units, other stock based awards, cash awards, or dividend equivalents;

- require that participants surrender their outstanding stock options, stock appreciation rights or any other exercisable grant, in exchange for a payment by us, in cash or shares of our common stock, equal to the difference between the exercise price and the fair market value of the underlying shares of common stock; provided, however, if the per share fair market value of the common stock does not exceed the per share stock option exercise price or stock appreciation right base amount, as applicable, we will not be required to make any payment to the participant upon surrender of the stock option or stock appreciation right; or

- after giving participants an opportunity to exercise all of their outstanding stock options and stock appreciation rights, terminate any unexercised stock options and stock appreciation rights on the date determined by our compensation committee.

In general terms, a change of control under our 2018 Plan occurs if:

- a person, entity or affiliated group, with certain exceptions, acquires more than 50% of our then outstanding voting securities;
- we merge into another entity unless the holders of our voting shares immediately prior to the merger have at least 50% of the combined voting power of the securities in the merged entity or its parent;
- we merge into another entity and the members of the board of directors prior to the merger would not constitute a majority of the board of the merged entity or its parent;
- we sell or dispose of all or substantially all of our assets;
- our complete liquidation or dissolution; or
- a majority of the members of our board of directors is replaced during any 12-month period by directors whose appointment or election is not endorsed by a majority of the incumbent directors.

Deferrals

The committee may permit or require participants to defer receipt of the payment of cash or the delivery of shares of common stock that would otherwise be due to the participant in connection with a grant under our 2018 Plan. The committee will establish the rules and procedures applicable to any such deferrals, consistent with the requirements of Section 409A of the Code.

Withholding

All grants under the 2018 Plan are subject to applicable U.S. federal, including Federal Insurance Contributions Act, or FICA, state and local, foreign, or other tax withholding requirements. We may require participants or other persons receiving grants or exercising grants to pay an amount sufficient to satisfy such tax withholding requirements with respect to such grants, or we may deduct from other wages and compensation paid by us the amount of any withholding taxes due with respect to such grant.

The committee may permit or require that our tax withholding obligation with respect to grants paid in our common stock to be paid by having shares withheld up to an amount that does not exceed the participant's minimum applicable withholding tax rate for United States federal, including FICA, state and local tax liabilities, or as otherwise determined by the committee. In addition, the committee may, in its discretion, and subject to such rules as the committee may adopt, allow participants to elect to have such share withholding applied to all or a portion of the tax withholding obligation arising in connection with any particular grant.

Transferability

Except as permitted by the committee with respect to non-qualified stock options, only a participant may exercise rights under a grant during the participant's lifetime. Upon death, the personal representative or other person entitled to succeed to the rights of the participant may exercise such rights. A participant cannot transfer those rights except by will or by the laws of descent and distribution or, with respect to grants other than incentive stock options, pursuant to a domestic relations order. The committee may provide in a grant instrument that a participant may transfer non-qualified stock options to family members, or one or more trusts or other entities for the benefit of or owned by family members, consistent with applicable securities laws.

Amendment; termination

Our board of directors may amend or terminate our 2018 Plan at any time, except that our stockholders must approve an amendment if such approval is required in order to comply with the Code, applicable laws, or applicable stock exchange requirements. Unless terminated sooner by our board of directors or extended with stockholder approval, our 2018 Plan will terminate on the day immediately preceding the tenth anniversary of the effective date of the 2018 Plan.

Establishment of sub-plans

Our board of directors may, from time to time, establish one or more sub-plans under the 2018 Plan to satisfy applicable blue sky, securities, or tax laws of various jurisdictions. Our board of directors may establish such sub-plans by adopting supplements to the 2018 Plan setting forth limitations on the committee's discretion and such additional terms and conditions not otherwise inconsistent with the 2018 Plan as our board of directors will deem necessary or desirable. All such supplements will be deemed part of the 2018 Plan, but each supplement will only apply to participants within the affected jurisdiction.

Clawback

Subject to applicable law, the committee may provide in any grant instrument that if a participant breaches any restrictive covenant agreement between the participant and us, or otherwise engages in activities that constitute cause (as defined in our 2018 Plan) either while employed by, or providing services to, us or within a specified period of time thereafter, all grants held by the participant will terminate, and we may rescind any exercise of an option or stock appreciation right and the vesting of any other grant and delivery of shares upon such exercise or vesting, as applicable on such terms as the committee will determine, including the right to require that in the event of any rescission:

- the participant must return the shares received upon the exercise of any option or stock appreciation right or the vesting and payment of any other grants; or

- if the participant no longer owns the shares, the participant must pay to us the amount of any gain realized or payment received as a result of any sale or other disposition of the shares (if the participant transferred the shares by gift or without consideration, then the fair market value of the shares on the date of the breach of the restrictive covenant agreement or activity constituting cause), net of the price originally paid by the participant for the shares.

The committee may also provide for clawbacks pursuant to a clawback policy, which our board of directors may in the future adopt and amend from time to time. Payment by the participant will be made in such manner and on such terms and conditions as may be required by the committee. We will be entitled to set off against the amount of any such payment any amounts that we otherwise owe to the participant.

2017 Equity Compensation Plan

Our 2017 Plan, was adopted by our board of directors in July 2017, approved by our stockholders in July 2017 and became effective at that time. Our 2017 Plan will be replaced by our 2018 Plan as our board of directors has determined not to make additional awards under the 2017 Plan following the completion of our initial public offering. However, outstanding grants under our 2017 Plan will continue in effect according to their terms, consistent with our 2017 Plan. Our 2017 Plan allows our board of directors or the compensation committee consisting of members thereof to: (i) determine the individuals to whom grants will be made under the 2017 Plan, (ii) determine the type, size and terms of the grants to be made to each such individual, (iii) determine the time when the grants will be made and the duration of any applicable exercise or restriction period, including the criteria for exercisability and the acceleration of exercisability,

(iv) amend the terms of any grant previously made under the 2017 Plan and (v) deal with any other matters arising under the 2017 Plan.

We had reserved 2,659,885 shares of our common stock for the issuance of awards under our 2017 Plan, 2,502,530 shares of which are subject to outstanding equity awards as of July 9, 2018. Upon the adoption of our 2018 Plan, any reserved shares that are not subject to outstanding equity awards under the 2017 Plan will be added to the shares of common stock available for issuance under our 2018 Plan.

The committee has full power to select, from among the individuals eligible for awards, the individuals to whom awards will be granted, to make any combination of awards to participants, and to determine the specific terms and conditions of each award, subject to the provisions of our 2017 Plan. Persons eligible to participate in our 2017 Plan will be those full or part-time officers, employees, non-employee directors, and other key persons, including consultants, as selected from time to time by the committee in its discretion.

Our 2017 Plan permits the granting of both options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Code and options that do not so qualify. The option exercise price of each option will be determined by the committee but may not be less than 100% of the fair market value of our common stock on the date of grant. The term of each option will be fixed by the committee and may not exceed ten years from the date of grant. The committee will determine at what time or times each option may be exercised.

The committee may award stock appreciation rights subject to such conditions and restrictions as it may determine. Stock appreciation rights entitle the recipient to shares of common stock equal to the value of the appreciation in our stock price over the exercise price. The exercise price may not be less than 100% of the fair market value of our common stock on the date of grant. The term of each stock appreciation right will be fixed by the committee and may not exceed ten years from the date of grant. The committee will determine at what time or times each stock appreciation right may be exercised.

The committee may award other equity-based awards of common stock to participants subject to such conditions and restrictions as it may determine. These conditions and restrictions may include the achievement of certain performance goals and/or other conditions. In the case of equity-based awards other than stock awards, awards may be payable in cash, our capital stock or any combination of the foregoing, as the committee may determine.

Our 2017 Plan provides that in the event of a "Change in Control," as defined in our 2017 Plan, the committee may provide that (i) (x) all outstanding options and SARs will accelerate and become fully exercisable and (y) all outstanding stock awards, stock units and other equity awards will become fully vested and will be payable on terms determined by the committee, (ii) determine that all outstanding options and SARs that are not exercised will be assumed by, or replaced with comparable options by the surviving corporation, or a parent or subsidiary of the surviving corporation, and other outstanding grants that remain in effect after the Change of Control will be converted to similar grants of the surviving corporation, or a parent or subsidiary of the surviving corporation, (iii) require that grantees surrender their outstanding options and SARs, in whole or in part, in exchange for one or more payments, in cash or our capital stock as determined by the committee, in an amount, if any, equal to the amount by which the then fair market value of the shares of our capital stock subject to the grantee's unexercised options and SARs exceeds the exercise price or base amount of the options and SARs, on such terms as the committee determines or (iv) after giving grantees an opportunity to exercise their outstanding options and SARs, in whole or in part, terminate any or all unexercised options and SARs at such time as the committee deems appropriate. Such assumption, surrender or termination will take place as of the date of the Change of

Control or such other date as the committee may specify. Without limiting the foregoing, if the per share fair market value of our capital stock equals or is less than the per share exercise price or base amount, as applicable, we would not be required to make any payment to the grantee upon surrender of the option or SAR.

A "Change of Control" under the 2017 Plan is defined as the occurrence of any of the following: (1) any person becoming a beneficial owner of our securities representing more than fifty percent of the voting power of our existing voting securities, subject to certain carve-outs, including a qualified initial public offering, or (2) the consummation of a merger or consolidation of the Company with another corporation, a sale of all or substantially all of our assets, or our liquidation or dissolution.

Employee Stock Purchase Plan

Purpose and types of grants

The purpose of our ESPP is to enable eligible employees to purchase shares of our common stock at a discount following the completion of this offering. Our ESPP is intended to qualify as an employee stock purchase plan under Section 423 of the Code.

Administration

A committee comprised of two or more members of our board of directors (referred to as "the plan administrator" in this description of our ESPP) will administer our ESPP and have authority to authorize offerings under our ESPP that are intended to comply with foreign law, as applicable. We expect to appoint the compensation committee of our board of directors as the plan administrator for our ESPP. The plan administrator has the authority to interpret and construe the provisions of our ESPP, and adopt rules and regulations for administering our ESPP in compliance with Section 423 of the Code, and its decisions are final and binding on all parties having an interest under our ESPP.

Shares subject to our ESPP

Subject to adjustment as described below, the maximum aggregate number of shares of common stock that may be issued or transferred under our ESPP will initially be limited to 348,612 shares. In addition, as of the first trading day of each fiscal year during the term of our ESPP (excluding any extensions), an additional number of shares of our common stock equal to 1% of the total number of shares outstanding on the last trading day in the immediately preceding fiscal year or 697,224 shares, whichever is less (or such lesser amount as determined by our board of directors) will be added to the number of shares authorized under our ESPP. If the total number of shares of common stock to be purchased pursuant to outstanding purchase rights on any particular date exceed the number of shares then available for issuance under our ESPP, then the plan administrator will allocate the available shares pro-rata and refund any excess payroll deductions or other contributions to participants.

Adjustments

In connection with stock splits, stock dividends, recapitalizations, and certain other events affecting our common stock, the plan administrator will make adjustments as it deems appropriate in the maximum number and kind of shares of our common stock available for issuance under our ESPP, the maximum number of shares of our common stock available for the annual increase in shares available for issuance under our ESPP, the maximum number and kind of shares of common stock purchasable per participant on a purchase date during an offering period, the number and kind of shares in effect under each outstanding purchase right, and the price per share in effect under each outstanding purchase right.

Eligibility

Our employees (and those of participating affiliates) who are regularly expected to work more than 20 hours per week for more than five months per calendar year are eligible to participate in our ESPP, unless otherwise mandated by local law. However, the plan administrator may waive one or both of these service requirements prior to the start of the applicable offering period.

Payroll deductions

Under our ESPP, eligible employees will be able to acquire shares of our common stock by accumulating funds through payroll deductions or other contributions, as determined by the plan administrator. Eligible employees will be able to select a rate of payroll deduction between 1% and 15% of their eligible compensation, unless the plan administrator establishes a different maximum percentage prior to the start date of the applicable offering period.

Offering periods

Our ESPP is implemented through a series of offering periods under which participating employees will automatically be granted a nontransferable purchase right to purchase shares of our common stock in that offering period using their accumulated payroll deductions, or other contributions, if permitted by the plan administrator. Each offering period will consist of one or more periods at the end of which shares will be purchased (each, a purchase interval). Each individual who is an eligible employee on the start date of an offering period under our ESPP may enter that offering period on such start date or on the start date of any purchase interval within that offering period, provided he or she remains an eligible employee. Each individual who first becomes an eligible employee after the start date of an offering period may enter that offering period on the start date of any purchase interval within that offering period on which he or she is an eligible employee. We have not yet determined when or how long the first offering period will be. Purchase intervals will be successive six month periods within an offering period, unless determined otherwise by the plan administrator prior to the start of the applicable offering period. In no event may an offering period exceed 27 months.

Termination and suspension of participation

A participant may irrevocably and prospectively withdraw from an offering period prior to the next scheduled purchase date in that offering period, and may elect to have any payroll deductions or other contributions collected during the purchase interval refunded or held for the purchase of shares on the next purchase date. To resume participation in any subsequent offering period, such individual must re-enroll in the ESPP. A participant's payroll deductions and other contributions will automatically be suspended while on an approved unpaid leave of absence and will terminate if the leave exceeds the longer of three months or the period that the participant has continued re-employment rights under law or contract. A participant's payroll deductions and other contributions will automatically be suspended when any limitations described below are reached. A participant's participation in an offering period automatically ends when he or she ceases to be an eligible employee, including due to termination of employment for any reason.

Limitation on purchase

Prior to the start date of the applicable offering period, and subject to the limitations described below and the adjustments described above, the plan administrator will determine the maximum number of shares of our common stock that a participant can purchase, each purchase date within that offering period and the maximum number of shares of our common stock that each participant can purchase for that offering period. Each purchase right will be automatically exercised in installments on each successive purchase

date within the offering period to purchase shares of common stock on behalf of each participant, other than participants whose payroll deductions have previously been refunded pursuant to the termination of purchase right provisions described above, on each such purchase date. Under no circumstances will purchase rights be granted under our ESPP to any eligible employee who would, immediately after the grant, own or hold outstanding options or other rights to purchase stock possessing 5% or more of the total combined voting power or value of all classes of our stock or that of any parent corporation or subsidiary corporation within the meaning of Section 424 of the Code. Prior to the start of any offering period and subject to any adjustments described above, the plan administrator will determine the maximum number of shares purchasable in total by all participants on a purchase date within an offering period and the maximum number of shares purchasable in total by all participants for that offering period. The foregoing limitations shall apply for each subsequent offering period, unless otherwise determined by the plan administrator prior to the start of any offering period.

Accrual limitations

No participant will have the right to purchase shares of our common stock in an amount that, when aggregated with the shares subject to purchase rights under all our employee stock purchase plans that are also in effect in the same calendar year, have a fair market value of more than $25,000, determined as of the first day of the applicable offering period.

Purchase price

The purchase price for shares of our common stock purchased under our ESPP will be established by the plan administrator prior to the start of the offering period, but will not be less than 85% of the lower of the fair market value of our common stock on (i) the date the eligible employee enters an offering period and (ii) the purchase date.

Change of control

If we experience a change of control, each outstanding purchase right will automatically be exercised, immediately prior to the effective date of the change of control. However, the applicable limitation on the number of shares of common stock purchasable per participant will continue to apply to any such purchase, but not the limitation applicable to the maximum number of shares of common stock purchasable in total by all participants.

In general terms, a change of control under our ESPP occurs if:

- any person, entity or affiliated group, with certain exceptions, acquires more than 50% of our then outstanding voting securities;
- we merge into another entity unless the holders of our voting shares immediately prior to the merger have at least 50% of the combined voting power of the securities in the merged entity or its parent;
- we merge into another entity and the members of the board of directors prior to the merger would not constitute a majority of the board of the merged entity or its parent;
- we sell or dispose of all or substantially all of our assets;
- our complete liquidation or dissolution; or
- a majority of the members of our board of directors is replaced during any 12-month period by directors whose appointment or election is not endorsed by a majority of the incumbent directors.

Amendment; termination

Our board of directors may amend, effective as of the start date of the next offering period, our ESPP at any time, except that our stockholders must approve an amendment if such approval is required to comply with Section 423 of the Code or other applicable law. Our board of directors may terminate our ESPP, effective following the close of the purchase interval, at any time. Unless terminated sooner by our board of directors, our ESPP will terminate on the earliest of: (1) the day immediately preceding the tenth anniversary of the effective date of our ESPP; (2) the date on which all shares available for issuance under our ESPP have been sold under our ESPP; or (3) the date on which all purchase rights under our ESPP are exercised in connection with a change of control.

401(k) plan

We participate in a tax-qualified retirement plan that provides eligible U.S. employees with an opportunity to save for retirement on a tax advantaged basis. Eligible employees are able to defer eligible compensation up to certain Code limits, which are updated annually. We provide matching contributions up to 50% of actual dollars contributed, not to exceed a maximum of 6% of gross wages. Employee contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participants' directions. Employees are immediately and fully vested in their own contributions, but any contributions we make vest equally over the first five years of service. After five years of service, contributions we make vest 100%. The 401(k) plan is intended to be qualified under Section 401(a) of the Code, with the related trust intended to be tax exempt under Section 501(a) of the Code. As a tax-qualified retirement plan, contributions to the 401(k) plan are deductible by us when made, and contributions and earnings on those amounts are not taxable to the employees until withdrawn or distributed from the 401(k) plan.

U.K. pension contribution plan

We provide a pension contribution plan for our employees in the United Kingdom, pursuant to which we match our employees' contributions each year in amounts up to 8% of their annual base salary.

Limitation on liability and indemnification matters

Section 145 of the DGCL authorizes a corporation's board of directors to grant, and authorizes a court to award, indemnity to officers, directors and other corporate agents. As permitted by Delaware law, our amended and restated certificate of incorporation as currently in effect provides that, to the fullest extent permitted by Delaware law, no director will be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director. Pursuant to Delaware law, such protection would be not available for liability:

- for any breach of a duty of loyalty to us or our stockholders;
- for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- for any transaction from which the director derived an improper benefit; or
- for an act or omission for which the liability of a director is expressly provided by an applicable statute, including unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the DGCL.

Our amended and restated certificate of incorporation as currently in effect also provides that if Delaware law is amended after the approval by our stockholders of the amended and restated certificate of

incorporation to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law.

Our amended and restated bylaws as currently in effect further provide that we must indemnify our directors and officers to the fullest extent permitted by Delaware law. Our amended and restated bylaws as currently in effect also authorize us to indemnify any of our employees or agents and permit us to secure insurance on behalf of any officer, director, employee or agent for any liability arising out of their action in that capacity, whether or not Delaware law would otherwise permit indemnification.

In addition, our amended and restated bylaws as currently in effect provide that we are required to advance expenses to our directors and officers as incurred in connection with legal proceedings against them for which they may be indemnified and that the rights conferred in the amended and restated bylaws are not exclusive.

We have entered into indemnification agreements with each of our directors and executive officers. These agreements, among other things, would require us to indemnify each director and officer to the fullest extent permitted by Delaware law, the amended and restated certificate of incorporation and amended and restated bylaws, for expenses such as, among other things, attorneys' fees, judgments, fines and settlement amounts incurred by the director or executive officer in any action or proceeding, including any action by or in our right, arising out of the person's services as our director or executive officer or as the director or executive officer of any subsidiary of ours or any other company or enterprise to which the person provides services at our request. Upon the completion of the offering, we intend to obtain and maintain directors' and officers' liability insurance.

The SEC has taken the position that personal liability of directors for violation of the federal securities laws cannot be limited and that indemnification by us for any such violation is unenforceable. The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws, each as currently in effect, may discourage stockholders from bringing a lawsuit against our directors and officers for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions.

Non-Employee director compensation

Other than with respect to the $36,000 of fees paid to Dr. Dhingra, and the $164,237 and $55,590 worth of non-qualified stock options granted to Dr. Dhingra and Mr. Slattery, respectively, no compensation was paid to or earned by our non-employee directors during our fiscal year ended March 31, 2018. Following the completion of this offering, we intend to consider and adopt a compensation policy for non-employee directors.

Certain relationships and related party transactions

Other than compensation arrangements, we describe below transactions and series of similar transactions, during our last three fiscal years, to which we were a party or will be a party, in which:

- the amounts involved exceeded or will exceed $120,000; and
- any of the directors, executive officers or holders of more than 5% of the common stock of Replimune, or any member of the immediate family of the foregoing persons, or person sharing the household with any of these individuals, had or will have a direct or indirect material interest.

Compensation arrangements for our directors and named executive officers are described elsewhere in this prospectus.

Financings

Series seed financing

On May 8, 2015, Replimune Limited entered into an initial share subscription agreement, which provided for the issue and sale by Replimune Limited of (i) an aggregate of 200,000 shares of series seed preferred stock and (ii) warrants to purchase an aggregate of 50,000 shares of series seed preferred stock to an affiliate of Omega Funds and an affiliate of Forbion Capital Partners for aggregate consideration of $2.0 million. The following table sets forth the numbers of shares of our series seed preferred stock and warrants to purchase shares of series seed preferred stock that were purchased by our directors, executive officers and holders of more than 5% of our capital stock and their respective affiliates.

Purchaser	Shares of series seed preferred stock purchased	Number of warrants	Aggregate purchase price ($)
Forbion Capital Fund III Coöperatief U.A.(1)	100,000	25,000	1,000,000
Omega Fund IV, L.P.(2)	100,000	25,000	1,000,000

(1) Forbion Capital Fund III Coöperatief U.A. is a holder of more than 5% of our capital stock and is affiliated with Sander Slootweg, a current member of our board of directors.

(2) Omega Fund IV, L.P. is a holder of more than 5% of our capital stock and is affiliated with Otello Stampacchia, a current member of our board of directors.

Series A financing

On September 16, 2015, Replimune Limited entered into a subscription agreement, pursuant to which it sold to affiliates of Omega Funds, Forbion Capital Partners and Atlas Ventures an aggregate of 432,276 shares of its series A preferred stock at a price of $34.70 per share for aggregate consideration of approximately $15.0 million. At a subsequent closing on March 10, 2017, Replimune Limited sold to the same group of investors an additional 432,277 shares of its series A preferred stock at a price of $34.70 per share for aggregate consideration of approximately $15.0 million. The following table sets forth the

numbers of shares of our series A preferred stock that were purchased by our directors, executive officers and holders of more than 5% of our capital stock and their respective affiliates.

Purchaser	Shares of series A preferred stock purchased	Aggregate purchase price ($)
Forbion Capital Fund III Coöperatief U.A.(1)	259,366	4,000,007.80
Omega Fund IV, L.P.(2)	259,366	4,000,007.80
Atlas Venture Fund X, L.P.(3)	345,821	6,999,996.30

(1) Forbion Capital Fund III Coöperatief U.A. is a holder of more than 5% of our capital stock and is affiliated with Sander Slootweg, a current member of our board of directors.

(2) Omega Fund IV, L.P. is a holder of more than 5% of our capital stock and is affiliated with Otello Stampacchia, a current member of our board of directors.

(3) Atlas Venture Fund X, L.P. is a holder of more than 5% of our capital stock and is affiliated with Jason Rhodes, a current member of our board of directors.

Corporate reorganization

On July 10, 2017, we completed a corporate reorganization, or the reorganization, in which all the shareholders of Replimune Limited exchanged all of the shares in Replimune Limited for shares of capital stock of Replimune Group. Following the reorganization, Replimune Limited is a wholly owned subsidiary of Replimune Group, Inc., a Delaware corporation. In order to give effect to the reorganization, we issued shares of our common stock, series seed preferred stock, series A preferred stock, and warrants to purchase shares of series seed preferred stock to each of the then existing shareholders of Replimune Limited in the same amount and classes of shares, or in the same form with respect to the warrants, as each such shareholder then held in Replimune Limited in exchange for each such shareholder's holdings in Replimune Limited, all pursuant to an exchange and contribution agreement among us, Replimune Limited and the then existing shareholders of Replimune Limited.

In connection with the reorganization, each option issued by Replimune Limited to acquire ordinary shares granted under Replimune Limited's then existing equity compensation plan was terminated and an equivalent number of options to acquire our common stock was granted, pursuant to an option rollover agreement, in the case of options granted in compliance with the requirements of the U.K. government's enterprise management incentive scheme, or pursuant to an option award, in the case of other outstanding options.

Series B financing

We entered into a series B preferred stock purchase agreement pursuant to which we sold an aggregate of 861,415 shares of our series B preferred stock to certain investors at an initial closing on July 21, 2017 and a subsequent closing on September 15, 2017, in each case at a price of $63.79 per share, for aggregate consideration of approximately $55.0 million. The following table sets forth the numbers of shares of our

series B preferred stock that were purchased by our directors, executive officers and holders of more than 5% of our capital stock and their respective affiliates.

Purchaser	Shares of series B preferred stock purchased	Aggregate purchase price ($)
Forbion Capital Fund III Coöperatief U.A.(1)	101,896	6,499,945.84
Omega Fund IV, LP(2)	101,896	6,499,945.84
Atlas Venture Fund X, L.P.(3)	101,896	6,499,945.84
Entities affiliated with Foresite Capital(4)	156,764	9,999,975.66
Entities affiliated with Bain Capital Life Sciences(5)	235,146	14,999,963.34

(1) Forbion Capital Fund III Coöperatief U.A. is a holder of more than 5% of our capital stock and is affiliated with Sander Slootweg, a current member of our board of directors.

(2) Omega Fund IV, L.P. is a holder of more than 5% of our capital stock and is affiliated with Otello Stampacchia, a current member of our board of directors.

(3) Atlas Venture Fund X, L.P. is a holder of more than 5% of our capital stock and is affiliated with Jason Rhodes, a current member of our board of directors.

(4) Entities affiliated with Foresite Capital are collectively the holders of more than 5% of our capital stock.

(5) Entities affiliated with Bain Capital Life Sciences are collectively the holders of more than 5% of our capital stock.

Common A stock

In July 2017, we issued 26,258 shares of common A stock to Colin Love, our Chief Operating Officer, for nominal consideration. Our common A stock carries voting rights, but only nominal economic rights. All such common A stock will be repurchased by us for nominal consideration and cancelled immediately prior to the completion of this offering.

Stockholder agreements

Investors' rights agreement

Following the completion of this offering, the holders of approximately 19.7 million shares of our common stock, or their permitted transferees, will be entitled to the registration rights set forth below with respect to registration of the resale of such shares under the Securities Act, pursuant to the amended and restated investors' rights agreement by and among us and certain of our stockholders. Additionally, each of Dr. Coffin, Mr. Astley-Sparke and Dr. Love will be entitled to the registration rights set forth below with respect to the shares of our common stock he holds on the effective date of the registration statement of which this prospectus is a part only after such time as he no longer provides services to us as an employee, consultant, officer or director. The provisions of the amended and restated investors' rights agreement, other than those relating to registration rights and certain transfer restrictions and lock-up obligations on the holders party thereto, will terminate immediately prior to the completion of this offering.

Demand registration rights

At any time after 180 days after the effective date of this initial public offering as set forth on the cover page of this prospectus, upon the written request of the holders holding at least 30% of the registrable securities then outstanding that we file a registration statement under the Securities Act covering the registration of registrable securities owned by such holder(s) having an anticipated aggregate offering price, net of selling expenses, of at least $30.0 million, we will be obligated to notify all holders of

registrable securities of such request within 10 days of receipt of such notice. As soon as practicable thereafter, and in any event within 60 days after the date such request is received, we will be required to register the sale on a registration statement on Form S-1 of all registrable securities that holders may request to be registered, subject to specified exceptions, conditions and limitations. We may postpone the filing of a registration statement for up to 120 days once in any 12-month period if in the good faith judgment of our board of directors such registration would be materially detrimental to us, and we are not required to effect the filing of a registration statement during the period starting with the date that is 60 days prior to our good faith estimate of the date of filing of a registration statement initiated by us and ending on a date 180 days after the effective date of a registration statement initiated by us. The underwriters of any underwritten offering will have the right to limit the number of shares having registration rights to be included in the registration statement.

"Piggyback" registration rights

If we register any securities for public sale, holders of registration rights will have the right to include their shares in the registration statement. The underwriters of any underwritten offering will have the right to limit the number of registrable securities to be included in the registration statement, but such number may not be below 30% of the total number of shares included in such registration statement. While the holders of such registrable securities will be entitled to notice of this offering and, at their option, to include their registrable securities in the registration statement of which this prospectus forms a part, we anticipate that all registration rights in respect of this offering will be waived and accordingly, no such registrable securities will need to be registered.

Form S-3 registration rights

If we are eligible to file a registration statement on Form S-3, holders of at least 30% of our registrable securities then outstanding have the right to request that we file a registration statement on Form S-3, so long as the aggregate price to the public of the securities to be sold under the registration statement on Form S-3 is at least $3 million or consists of all the remaining registrable securities, and subject to specified exceptions, conditions and limitations.

Expenses of registration

We are generally required to bear all expenses, including the fees and expenses of one counsel, not to exceed $50,000, representing the selling holders, incurred in connection with the demand, piggyback and Form S-3 registrations described above. We are not required to bear selling expenses, which include all underwriting discounts, selling commissions, stock transfer taxes applicable to the sale of registrable securities and fees and disbursements of any additional counsel for any selling holder. We are not required to pay registration expenses if the registration request is withdrawn at the request of the holders of a majority of the registrable securities unless (i) the holders of a majority of the registrable securities then outstanding agree to forfeit their right to one registration or (ii) the withdrawal is due to the discovery of a material adverse change in the conduct of our business.

Termination of registration rights

The demand, piggyback and Form S-3 registration rights discussed above will terminate as to a given holder of registrable securities upon the earlier of (i) the closing of a liquidity event as defined in our certificate of incorporation, (ii) five years following the completion of this offering, and (iii) such time as Rule 144 or another similar exemption under the Securities Act is available for the sale of all shares held by the holder during a three-month period without registration and without the requirement for us to be in compliance with the current public information required under Rule 144(c)(1).

Agreements with our stockholders

In addition to the amended and restated investors' rights agreement, we have also entered into an amended and restated voting agreement and an amended and restated right of first refusal and co-sale agreement with holders of our preferred stock. The amended and restated voting agreement, among other things, provides for the voting of shares with respect to the composition of our board of directors and the voting of shares in favor of specified transactions approved by our board of directors and the holders of a requisite percentage of our preferred stock. The amended and restated right of first refusal and co-sale agreement, among other things, provides first refusal and tag-along sale rights for holders of our preferred stock with respect to transfers by certain stockholders. The provisions each of the amended and restated voting agreement and the amended and restated right of first refusal and co-sale agreement will terminate immediately prior to the completion of this offering.

Other transactions with related persons

Director relationships

Certain of our directors serve on our board of directors as representatives of entities which beneficially own 5% or more of our common stock, as indicated in the table below.

Director	Principal stockholders
Sander Slootweg	Forbion Capital Fund III Coöperatief U.A.
Otello Stampacchia	Omega Fund IV, L.P.
Jason Rhodes	Atlas Venture Fund X, L.P.

In addition, Mr. Astley-Sparke serves as a venture partner at Forbion Capital Partners, pursuant to which he is paid an annual retainer of $25,000. Mr. Astley-Sparke does not serve as a representative of Forbion Capital Partners on our board of directors.

Related party employment relationships

Our executive officers have employment agreements with us for their services. For information about the employment agreements with our named executive officers, refer to "Executive and director compensation—Employment arrangements."

Related party transactions policy

Our board of directors reviews and approves transactions with directors, officers and holders of five percent or more of our voting securities and their affiliates, each a related party. Prior to this offering, the material facts as to the related party's relationship or interest in the transaction are disclosed to our board of directors prior to their consideration of such transaction, and the transaction is not considered approved by our board of directors unless a majority of the directors who are not interested in the transaction approve the transaction. Further, when stockholders are entitled to vote on a transaction with a related party, the material facts of the related party's relationship or interest in the transaction are disclosed to the stockholders, who must approve the transaction in good faith.

In connection with the completion of this offering, we intend to adopt and maintain a written related party transactions policy that such transactions are subject to review and approval or ratification by our audit committee.

Indemnification of directors and officers

See "Executive and director compensation—Limitation on liability and indemnification matters."

Indications of interest

Several of our existing stockholders (or their affiliates), including stockholders affiliated with certain of our directors, have indicated an interest in purchasing up to an aggregate of approximately $40.0 million in shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters could determine to sell more, fewer or no shares to any of these stockholders and any of these stockholders could determine to purchase more, fewer or no shares in this offering. The underwriters will receive the same underwriting discount on any shares purchased by these stockholders as they will on any other shares sold to the public in this offering.

Principal stockholders

The following table sets forth information regarding the beneficial ownership of our common stock as of July 9, 2018 by:

- each of our directors and named executive officers;
- all of our directors and executive officers as a group; and
- each person, or group of affiliated persons, who is known by us to beneficially own more than 5% of our common stock.

Beneficial ownership is determined according to the rules of the SEC and generally means that a person has beneficial ownership of a security if he, she or it possesses sole or shared voting or investment power of that security, including options and warrants that are currently exercisable or exercisable within 60 days after July 9, 2018. Shares of our common stock issuable pursuant to stock options and warrants are deemed outstanding for computing the percentage of the person holding such options or warrants and the percentage of any group of which the person is a member but are not deemed outstanding for computing the percentage of any other person. Except as indicated by the footnotes below, we believe, based on the information furnished to us, that the persons named in the table below have sole voting and investment power with respect to all shares of common stock shown that they beneficially own, subject to community property laws where applicable. The information does not necessarily indicate beneficial ownership for any other purpose, including for purposes of Section 13(d) and 13(g) of the Securities Act.

Our calculation of the percentage of beneficial ownership prior to this offering is based on 24,138,587 shares of common stock outstanding as of July 9, 2018, after giving effect to (i) the conversion of all outstanding shares of our preferred stock into an aggregate of 19,157,360 shares of common stock upon the completion of this offering and (ii) all outstanding warrants to purchase shares of preferred stock becoming warrants to purchase shares of common stock upon the completion of this offering, in each case assuming that this offering was completed on July 9, 2018. Our calculation of the percentage of beneficial ownership after this offering is based on 30,838,587 shares of common stock outstanding immediately after the completion of this offering (assuming no exercise of the underwriters' over-allotment option to purchase additional shares of our common stock). In addition, several of our existing stockholders (or their affiliates), including stockholders affiliated with certain of our directors, have indicated an interest in purchasing up to an aggregate of approximately $40.0 million in shares of our common stock in this offering at the initial public offering price. The information set forth below does not reflect any potential purchases in this offering by such existing stockholders.

Beneficial owner	Prior to this offering Number	Prior to this offering Percent	After this offering Percent
Greater than 5% stockholders:			
Atlas Venture Fund X, L.P.(1)	4,453,386	18.4%	14.4%
Bain Capital Life Sciences Fund, L.P.(2)	2,338,968	9.7%	7.6%
Forbion Capital Fund III Coöperatief U.A.(3)	4,836,788	19.8%	15.6%
Foresite Capital(4)	1,559,312	6.5%	5.1%
Omega Fund IV, L.P.(5)	4,836,788	19.8%	15.6%
Directors and Named Executive Officers:			
Philip Astley-Sparke(6)	1,466,542	6.1%	4.8%
Robert Coffin(7)	2,498,324	10.3%	8.1%
Pamela Esposito(8)	295,737	*	*
Colin Love(9)	1,159,433	4.8%	3.8%
Jason Rhodes(10)(1)	4,453,386	18.4%	14.4%
Sander Slootweg(11)(3)	4,836,788	19.8%	15.6%
Otello Stampacchia(12)(5)	4,836,788	19.8%	15.6%
Kapil Dhingra	155,210	*	*
Hyam Levitsky	—	—	—
Joseph Slattery	—	—	—
Dieter Weinand	—	—	—
All directors and executive officers as a group (12 persons)(6)(7)(8)(9)(10)(11)(12)(13)	19,702,208	78.1%	61.7%

* Represents beneficial ownership of less than one percent of our outstanding common stock.

(1) Consists of (i) 3,439,839 shares of common stock issuable upon conversion of shares of our series A preferred stock and (ii) 1,013,547 shares of common stock issuable upon conversion of shares of our series B preferred stock held directly by Atlas Venture Fund X, L.P. Atlas Venture Associates X, L.P. is the general partner of Atlas Venture Fund X, L.P., and Atlas Venture Associates X, LLC is the general partner of Atlas Venture Fund X, L.P. Peter Barrett, Bruce Booth, Jean-Francois Formela, Jeff Fagnan, Chris Lynch and Ryan Moore are the members of Atlas Venture Associated X, LLC and collectively make investment decisions on behalf of Atlas Venture Fund X, LLC. The address for Atlas Venture Fund X, is 25 First Street, Suite 303, Cambridge, Massachusetts 02140.

(2) Consists of (i) 2,121,788 shares of common stock issuable upon conversion of shares of our series B preferred stock held directly by Bain Capital Life Sciences Fund, L.P., or BCLS and (ii) 217,180 shares of common stock issuable upon conversion of shares of our series B preferred stock held directly by BCIP Life Sciences Associates, L.P., or BCIP. The governance, investment strategy and decision-making process with respect to investments held by BCLS and BCIP are directed by Bain Capital Life Sciences Investors, LLC, whose managers are Jeffrey Schwartz and Adam Koppel. As a result, each of Bain Capital Life Sciences Investors, LLC, Mr. Schwartz and Dr. Koppel may be deemed to share voting and dispositive power over the shares held by BCLS and BCIP. The address of BCLS is c/o Bain Capital Life Sciences, L.P., 200 Clarendon Street, Boston, Massachusetts 02116.

(3) Consists of (i) 248,672 shares of common stock issuable upon exercise of warrants to purchase shares of common stock, (ii) 994,688 shares of common stock issuable upon conversion of shares of our series seed preferred stock, (iii) 2,579,881 shares of common stock issuable upon conversion of shares of our series A preferred stock, and (iv) 1,013,547 shares of common stock issuable upon conversion of shares of our series B preferred stock held directly by Forbion Capital Fund III Coöperatief U.A. The address for Forbion Capital Fund III Coöperatief U.A. is Gooimeer 2-35, 1411 DC Naarden, the Netherlands.

(4) Consists of (i) 779,656 shares of common stock issuable upon conversion of shares of our series B preferred stock held directly by Foresite Capital Fund III, or FCF III, and (ii) 779,656 shares of common stock issuable upon conversion of shares of our series B preferred stock held directly by Foresite Capital Fund IV, L.P., or FCF IV. Foresite Capital Management III, LLC, or FCM III is the general partner of FCF III and Foresite Capital Management IV, LLC, or FCM IV, is the general partner of FCF IV. The managing director of FCM III and FCM IV, James Tananbaum, may be deemed to have voting and investment power with respect to such shares. Each of FCM III and its members, FCM IV and its members and Mr. Tananbaum disclaims beneficial ownership of any of these shares except to the extent of any pecuniary interest therein, and this footnote is not an admission that FCM III and its members, FCM IV or Mr. Tananbaum is the beneficial owner of these shares for purposes of Section 16 or any other purpose. The address of FCF III and FCF IV is c/o Foresite Capital Management, LLC, 600 Montgomery Street, Suite 4500, San Francisco, California 94111.

(5) Consists of (i) 248,672 shares of common stock issuable upon exercise of warrants to purchase shares of common stock, (ii) 994,688 shares of common stock issuable upon conversion of shares of our series seed preferred stock, (iii) 2,579,881 shares of common stock issuable

upon conversion of shares of our series A preferred stock, and (iv) 1,013,547 shares of common stock issuable upon conversion of shares of our series B preferred stock held directly by Omega Fund IV, L.P., or Omega IV. Omega Fund IV GP, L.P. is the general partner of Omega IV. Omega Fund IV GP Manager, Ltd., or Omega IV GP Ltd, is the general partner of Omega Fund IV GP, L.P. Otello Stampacchia, Renee Aguiar-Lucander, Richard Lim, and Anne-Mari Paster are all the shareholders and all the directors of Omega IV GP Ltd. Together they have shared voting and investment power over the shares held by Omega IV. The address of Omega IV and the above named individuals is c/o Omega Fund Management Limited, 1 Royal Plaza, Royal Avenue, St. Peter Port, Guernsey, GY1 2HL. The address of Omega IV GP LP and Omega IV GP Ltd is c/o Omega Fund Management (US) Inc., 545 Boylston St., Suite 802, Boston, Massachusetts 02116.

(6) Consists of (i) 1,442,297 shares of our common stock and (ii) 24,245 shares of common stock underlying options that are exercisable within 60 days of July 9, 2018.

(7) Consists of (i) 2,412,118 shares of our common stock and (ii) 86,206 shares of common stock underlying options that are exercisable within 60 days of July 9, 2018.

(8) Consists of 295,737 shares of common stock underlying options that are exercisable within 60 days of July 9, 2018.

(9) Consists of (i) 1,119,024 shares of our common stock and (ii) 40,409 shares of common stock underlying options that are exercisable within 60 days of July 9, 2018. Does not include 26,258 shares of common A stock held by Dr. Love, which will be repurchased by us and cancelled immediately prior to the completion of this offering.

(10) Mr. Rhodes is a partner at Atlas Ventures. Mr. Rhodes disclaims beneficial ownership of all shares held of record by affiliates of Atlas Ventures.

(11) Mr. Slootweg is a managing partner of Forbion Capital Partners. Mr. Slootweg disclaims beneficial ownership of all shares held of record by affiliates of Forbion Capital Partners.

(12) Dr. Stampacchia is a managing member of Omega Fund Management. Dr. Stampacchia disclaims beneficial ownership of all shares held of record by affiliates of Omega Fund Management.

(13) Dr. Howard Kaufman does not own any shares of our common stock.

Description of capital stock

The following description of our capital stock and provisions of our amended and restated certificate of incorporation and bylaws as they will be in effect immediately prior to the completion of this offering are summaries and are qualified in their entirety by reference to our amended and restated certificate of incorporation and bylaws that will be in effect immediately prior to the completion of this offering, the forms of which will be filed as exhibits to the registration statement of which this prospectus forms a part prior to its effectiveness, and by applicable law, including the DGCL.

Upon the completion of this offering, our authorized capital stock will consist of 150 million shares of common stock, par value $0.001 per share, and 10 million shares of preferred stock, par value $0.001 per share, all of which shares will be undesignated. Unless our board of directors determines otherwise, we will issue all shares of our capital stock in uncertificated form.

In connection with this offering, we effected a 1-for-9.94688 forward stock split of our common stock on July 9, 2018.

As of July 9, 2018, we had approximately 23 stockholders of record and 5,007,485 shares of our common stock were outstanding, including 26,258 shares of our common A stock which we will repurchase at a nominal value and cancel immediately prior to the completion of this offering. Upon completion of the conversion of our preferred stock into shares of our common stock and the repurchase and cancelation of all outstanding shares of our common A stock, 24,138,587 shares of our common stock will be outstanding. In addition, as of July 9, 2018, we had outstanding options to purchase 2,502,530 shares of our common stock under our 2017 Plan at a weighted average exercise price of $2.72 per share, 660,368 of which were exercisable as of that date.

Common stock

The holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of the stockholders. The holders of our common stock do not have any cumulative voting rights. Holders of our common stock are entitled to receive ratably any dividends declared by our board of directors out of funds legally available for that purpose, subject to any preferential dividend rights of any outstanding preferred stock. Our common stock has no preemptive rights, conversion rights or other subscription rights or redemption or sinking fund provisions.

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in all assets remaining after payment of all debts and other liabilities and any liquidation preference of any outstanding preferred stock. The shares to be issued by us in this offering will be, when issued and paid for, validly issued, fully paid and non-assessable.

Pursuant to our amended and restated certificate of incorporation as currently in effect, 26,258 shares of our common stock is designated as common A stock. Effective as of immediately prior to the completion of this offering, we will repurchase all outstanding shares of our common A stock at a nominal purchase price and cancel such shares immediately thereafter.

Preferred stock

Immediately prior to the completion of this offering, all outstanding shares of our preferred stock will be converted into shares of our common stock. Upon the completion of this offering, our board of directors will have the authority, without further action by our stockholders, to issue up to 10 million shares of

preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control of our company or other corporate action. Immediately after the completion of this offering, no shares of preferred stock will be outstanding, and we have no present plan to issue any shares of preferred stock following this offering.

Options

Upon completion of the offering, we will have options to purchase 2,502,530 shares of our common stock outstanding. Effective upon the completion of this offering, we expect to grant to certain of our employees and directors options to purchase approximately 1,147,500 shares of our common stock under our 2018 Plan at an exercise price equal to the initial public offering price listed on the cover page of this prospectus. See "Executive and director compensation—Employee benefit and stock plans" for a discussion of the terms of the 2018 Plan and the 2017 Plan.

Warrants

Immediately prior to the completion of this offering, all warrants to purchase shares of series seed preferred stock will become warrants to purchase shares of common stock on a one-for-one basis.

Anti-takeover effects of provisions of Delaware law and our amended and restated certificate of incorporation and amended and restated bylaws

Requirements for advance notification of stockholder meetings, nominations and proposals

Our amended and restated certificate of incorporation provides that special meetings of the stockholders may be called only by or at the direction of our board of directors. Our amended and restated bylaws prohibit the conduct of any business at a special meeting other than as specified in the notice for such meeting. These provisions may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control or management of our company.

Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of our board of directors or a committee of our board of directors. In order for any matter to be "properly brought" before a meeting, a stockholder will have to comply with advance notice requirements and provide us with certain information. Additionally, vacancies and newly created directorships may be filled only by a vote of a majority of the directors then in office, even though less than a quorum, and not by the stockholders. Our amended and restated bylaws allow the presiding officer at a meeting of the stockholders to adopt rules and regulations for the conduct of meetings which may have the effect of precluding the conduct of certain business at a meeting if the rules and regulations are not followed. These provisions may also defer, delay or discourage a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company.

Our amended and restated certificate of incorporation provides that our board of directors is expressly authorized to adopt, amend or repeal our amended and restated bylaws.

No cumulative voting

The DGCL provides that stockholders are not entitled to cumulate votes in the election of directors unless our amended and restated certificate of incorporation provides otherwise. Our amended and restated certificate of incorporation does not expressly provide for cumulative voting.

Amendments to certificate of incorporation and bylaws

The DGCL provides that, unless a corporation's certificate of incorporation provides otherwise, the affirmative vote of holders of shares constituting a majority of the votes of all shares entitled to vote may approve amendments to the certificate of incorporation.

Our amended and rested certificate of incorporation and amended and restated bylaws will provide that the affirmative vote of holders of at least 75% of the outstanding shares of capital stock, voting together as a single class, and entitled to vote in the election of directors will be required to amend, alter, change or repeal the amended and restated certificate of incorporation and the amended and restated bylaws. This requirement of a supermajority vote to approve amendments to our amended and restated certificate of incorporation and amended and restated bylaws could enable a minority of our stockholders to exercise veto power over such amendments.

Forum selection clause

Our amended and restated certificate of incorporation will provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall, to the fullest extent permitted by law, be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf; (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors or officers or other employees to us or our stockholders; (iii) any action asserting a claim against us or any director or officer or other employee of ours arising pursuant to any provision of the DGCL or our amended and restated certificate of incorporation or amended and restated bylaws; or (iv) any action asserting a claim against us or any director or officer or other employee of ours governed by the internal affairs doctrine. Our amended and restated certificate of incorporation will further provide that any person or entity that acquires any interest in shares of our capital stock shall be deemed to have notice of and to have consented to the provisions described above. Moreover, our amended and restated certificate of incorporation will provide that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

Staggered board

Our amended and restated certificate of incorporation will provide that our board of directors will be divided into three classes of directors, with the number of directors in each class to be as nearly equal as possible. See "Management—Composition of our board of directors."

Stockholder action by written consent

Pursuant to Section 228 of the DGCL, any action required to be taken at any annual or special meeting of the stockholders may be taken without a meeting, without prior notice and without a vote if a consent or consents in writing, setting forth the action so taken, is signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares of our stock entitled to vote thereon were present and voted, unless the

corporation's certificate of incorporation provides otherwise. Our amended and restated certificate of incorporation will prohibit the taking of any action of our stockholders by written consent without a meeting.

Delaware anti-takeover statute

We have not opted out of, and therefore are subject to, Section 203 of the DGCL. Section 203 provides that, subject to certain exceptions specified in the law, a publicly-held Delaware corporation shall not engage in certain "business combinations" with any "interested stockholder" for a three-year period after the date of the transaction in which the person became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (1) shares owned by persons who are directors and also officers and (2) shares owned under employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the date of the transaction, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least $66^{2}/_{3}\%$ of the outstanding voting stock which is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting stock. Since Section 203 will apply to us, we expect that it would have an anti-takeover effect with respect to transactions our board of directors does not approve in advance. In such event, we would also anticipate that Section 203 could discourage attempts that might result in a premium over the market price for the shares of common stock held by stockholders.

Under certain circumstances, Section 203 makes it more difficult for a person who would be an "interested stockholder" to effect various business combinations with a corporation for a three-year period. The provisions of Section 203 may encourage companies interested in acquiring our company to negotiate in advance with our board of directors because the stockholder approval requirement would be avoided if our board of directors approves either the business combination or the transaction that results in the stockholder becoming an interested stockholder. These provisions also may make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Authorized but unissued capital stock

The DGCL does not require stockholder approval for any issuance of authorized shares. However, the listing requirements of Nasdaq, which apply so long as our common stock remains listed on Nasdaq, require stockholder approval of certain issuances equal to or exceeding 20% of the then outstanding voting power or then outstanding number of shares of common stock. These additional shares may be used for a variety

of corporate purposes, including future public offerings, to raise additional capital or to facilitate acquisitions.

One of the effects of the existence of unissued and unreserved common stock or preferred stock may be to enable our board of directors to issue shares to persons friendly to current management, which issuance could render more difficult or discourage an attempt to obtain control of our company by means of a merger, tender offer, proxy contest or otherwise, and thereby protect the continuity of our management and possibly deprive our investors of opportunities to sell their shares of common stock at prices higher than prevailing market prices.

Registration rights

Following the completion of this offering, the holders of approximately 19.7 million shares of our common stock, or their transferees, will be entitled to the registration rights with respect to registration of the resale of such shares under the Securities Act pursuant to the amended and restated investors' rights agreement, by and among us and certain of our investors. See "Certain relationships and related party transactions—Stockholder agreements—Investors' rights agreement" for more information.

Limitations of liability and indemnification

See "Executive and director compensation—Limitation on liability and indemnification matters."

Market listing

We have applied to have the common stock listed on Nasdaq under the symbol "REPL."

Transfer agent and registrar

Upon the completion of this offering, the transfer agent and registrar for our common stock will be Computershare.

Material United States federal income tax consequences to non-U.S. holders of our common stock

The following is a discussion of the material U.S. federal income tax consequences of the acquisition, ownership, and disposition of our common stock to a non-U.S. holder that purchases shares of our common stock for cash in this offering. For purposes of this discussion, a "non-U.S. holder" means a beneficial owner (other than a partnership or other pass-through entity) of our common stock that is not, for U.S. federal income tax purposes:

- an individual who is a citizen or resident alien of the United States;
- a corporation or any other organization taxable as a corporation for U.S. federal income tax purposes, created or organized in the United States or under the laws of the United States or of any state thereof or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust if (i) the trust is subject to the primary supervision of a U.S. court and all substantial decisions of the trust are controlled by one or more U.S. persons or (ii) the trust has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

This discussion does not address the tax treatment of partnerships (or other entities that are treated as partnerships, grantor trusts, or other pass-through entities for U.S. federal income tax purposes) or persons that hold their common stock through partnerships, grantor trusts or such other pass-through entities. The tax treatment of a partner in a partnership or a holder of an interest in another pass-through entity that will hold our common stock generally will depend upon the status of the partner or interest holder and the activities of the partner or interest holder and the partnership or other pass-through entity, as applicable. Such a partner or interest holder should consult his, her, or its own tax advisor regarding the tax consequences of the acquisition, ownership and disposition of our common stock through a partnership or other pass-through entity, as applicable.

This discussion is based upon the provisions of the Code, the U.S. Treasury regulations promulgated thereunder, judicial decisions, and published rulings, administrative procedures and other guidance of the Internal Revenue Service, which we refer to as the IRS, all as in effect as of the date hereof. These authorities are subject to change and to differing interpretations, possibly with retroactive effect, which could result in U.S. federal income tax consequences different from those summarized below. No ruling has been or will be sought from the IRS with respect to the matters summarized below, and there can be no assurance that the IRS will not take a contrary position regarding the U.S. federal income tax consequences of the acquisition, ownership, or disposition of our common stock, or that any such contrary position would not be sustained by a court.

This discussion is not a complete analysis of all of the potential U.S. federal income tax consequences relating to the acquisition, ownership, and disposition of our common stock by non-U.S. holders, nor does it address any U.S. federal estate or gift tax or generation-skipping transfer tax consequences, any tax consequences arising under any state, local, or non-U.S. tax laws, the impact of any applicable income tax treaty, any consequences under the Medicare contribution tax on net investment income, the alternative minimum tax, or any consequences under other U.S. federal tax laws. In addition, this discussion does not

address tax consequences resulting from a non-U.S. holder's particular circumstances or to non-U.S. holders that may be subject to special tax rules, including, without limitation:

- non-U.S. governments, agencies or instrumentalities thereof, or entities they control;
- "controlled foreign corporations" and their shareholders;
- "passive foreign investment companies" and their shareholders;
- partnerships, grantor trusts or other entities that are treated as pass-through entities for U.S. federal income tax purposes, and their owners;
- corporations that accumulate earnings to avoid U.S. federal income tax;
- former citizens or former long-term residents of the United States;
- banks, insurance companies or other financial institutions;
- tax-exempt pension funds or other tax-exempt organizations;
- persons who acquired our common stock pursuant to the exercise of employee stock options or otherwise as compensation;
- tax-qualified retirement plans;
- traders, brokers or dealers in securities, commodities or currencies;
- persons who hold our common stock as a position in a hedging transaction, wash sale, "straddle," "conversion transaction" or other risk reduction transaction or synthetic security;
- persons who do not hold our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, for investment purposes);
- persons who own or have owned, or are deemed to own or to have owned, more than 5% of our common stock (except to the extent specifically set forth below);
- accrual method taxpayers who are required to recognize income for U.S. federal income tax purposes no later than when such income is taken into account for financial accounting purposes; or
- persons deemed to sell our common stock under the constructive sale provisions of the Code.

Prospective investors should consult their tax advisors regarding the particular U.S. federal income, estate, gift, and generation-skipping transfer tax consequences to them of acquiring, owning and disposing of our common stock, as well as any tax consequences arising under any state, local or non-U.S. tax laws and any other U.S. federal tax laws. Prospective investors should also consult their tax advisors regarding the potential impact of any applicable income or estate tax treaty between the United States and such prospective investor's country of residence and of the rules described below under the heading "Foreign Account Tax Compliance Act."

Distributions on common stock

As described in the section entitled "Dividend policy," we currently intend to retain all available funds and any future earnings for use in the operation of our business and do not anticipate paying any dividends on our common stock in the foreseeable future. The disclosure in this section addresses the consequences

should our board of directors, in the future, determine to make a distribution of cash or property with respect to our common stock (other than certain distributions of stock which may be made free of tax), or to effect a redemption that is treated for tax purposes as a distribution under U.S. federal income tax principles. Any such distribution will generally constitute a dividend for U.S. federal tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent such a distribution exceeds both our current and our accumulated earnings and profits, such excess will be allocated ratably among the shares of common stock with respect to which the distribution is made, will constitute a return of capital, and will first be applied against and reduce the non-U.S. holder's adjusted tax basis in those shares of common stock, but not below zero. Distributions in excess of our current and accumulated earnings and profits and in excess of a non-U.S. holder's tax basis in that non-U.S. holder's shares of common stock then will be treated as gain from the sale of that common stock, subject to the tax treatment described below under "Gain on disposition of common stock." A non-U.S. holder's adjusted tax basis in a share of common stock is generally the purchase price of the share, reduced by the amount of any distributions constituting a return of capital with respect to that share.

Any dividend paid to a non-U.S. holder of our common stock generally will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividend, or such lower rate as may be specified by an applicable income tax treaty between the United States and such non-U.S. holder's country of residence. If a non-U.S. holder is eligible for benefits under an income tax treaty and wishes to claim a reduced rate of withholding, the non-U.S. holder generally will be required to provide us or our paying agent with a properly completed IRS Form W-8BEN, Form W-8BEN-E, or other applicable form, certifying under penalties of perjury the non-U.S. holder's qualification for the reduced rate. This certification must be provided to us or our paying agent prior to the payment of the dividend and may be required to be updated periodically. Special certification requirements apply to non-U.S. holders that hold common stock through certain foreign intermediaries. Non-U.S. holders that do not timely provide the required certifications, but that qualify for a reduced income tax treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. If we are not able to determine whether or not a distribution will exceed current and accumulated earnings and profits at the time the distribution is made, we may withhold tax on the entire amount of any distribution at the same rate as we would withhold on a dividend. However, a non-U.S. holder may obtain a refund of amounts that we withhold to the extent attributable to the portion of the distribution in excess of our current and accumulated earnings and profits.

If a non-U.S. holder holds our common stock in connection with the conduct of a trade or business in the United States, and dividends paid on the common stock are effectively connected with the non-U.S. holder's U.S. trade or business (and, if required by an applicable income tax treaty between the United States and such non-U.S. holder's country of residence, are attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States, as defined under the applicable income tax treaty), the non-U.S. holder will be exempt from U.S. federal withholding tax on the dividends. To claim the exemption, the non-U.S. holder must furnish a properly executed IRS Form W-8ECI (or other applicable form) prior to the payment of the dividends. Any dividends paid on our common stock that are effectively connected with a non-U.S. holder's U.S. trade or business (and satisfy any other applicable income tax treaty requirements) generally will be subject to U.S. federal income tax on a net income basis at the regular graduated U.S. federal income tax rates generally applicable to U.S. persons (as defined in the Code). A non-U.S. holder that is treated as a corporation for U.S. federal income tax purposes also may be subject to an additional branch profits tax equal to 30% (or such lower rate as is specified by an applicable income tax treaty between the United States and such non-U.S. holder's country of residence) of

a portion of its earnings and profits for the taxable year that are effectively connected with a U.S. trade or business, as adjusted for certain items.

Gain on disposition of common stock

Subject to the discussion below regarding backup withholding and foreign accounts, a non-U.S. holder generally will not be subject to U.S. federal income tax on any gain realized upon the sale, exchange, or other taxable disposition of our common stock unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a U.S. trade or business (and, if required by an applicable income tax treaty between the United States and such non-U.S. holder's country of residence, the gain is attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States), in which case the non-U.S. holder will generally be required to pay tax on the gain derived from the sale, exchange, or other taxable disposition (net of certain deductions or credits) under regular graduated U.S. federal income tax rates generally applicable to U.S. persons, and in the case of a non-U.S. holder that is treated as a corporation for U.S. federal income tax purposes, such non-U.S. holder may be subject to a branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such non-U.S. holder's country of residence;

- the non-U.S. holder is an individual who is present in the United States for a period or periods aggregating 183 days or more during the taxable year in which the sale, exchange, or other taxable disposition occurs and certain other conditions are met, in which case the non-U.S. holder will be subject to U.S. federal income tax at a flat 30% rate (or such lower rate as is specified by an applicable income tax treaty between the United States and such non-U.S. holder's country of residence) on the net gain derived from the sale, exchange, or other taxable disposition, which gain may be offset by U.S. source capital losses (even though the non-U.S. holder is not considered a resident of the United States) provided that the non-U.S. holder has timely filed U.S. federal income tax returns reporting those losses; or

- our common stock is a "United States real property interest" by reason of our status as a "United States real property holding corporation," or USRPHC, for U.S. federal income tax purposes during the five-year period preceding such sale, exchange or other taxable disposition (or the non-U.S. holder's holding period, if shorter). Generally, a corporation is a USRPHC only if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business.

We believe we are not now and we do not anticipate becoming a USRPHC. However, there can be no assurance that we are not now a USRPHC or will not become one in the future. Even if we are or become a USRPHC, for so long as our common stock is "regularly traded," as defined by applicable U.S. Treasury regulations, on an established securities market, sales of our common stock generally will not be subject to tax for non-U.S. holders that have not held more than 5% of our common stock, actually or constructively, during the five-year period preceding such non-U.S. holder's sale, exchange or other taxable disposition of our common stock (or the non-U.S. holder's holding period, if shorter). If we are determined to be a USRPHC and the foregoing exception does not apply, then the non-U.S. holder generally will be taxed on its net gain derived from the disposition at the graduated U.S. federal income tax rates applicable to U.S. persons.

Information reporting and backup withholding

Generally, we or certain financial middlemen must report annually to the IRS and to each non-U.S. holder the gross amount of dividends and other distributions on our common stock paid to the non-U.S. holder and the amount of tax withheld, if any, with respect to those distributions. Pursuant to applicable income tax treaties or other agreements, the IRS may make these reports available to tax authorities in the non-U.S. holder's country of residence or incorporation.

A non-U.S. holder may be subject to backup withholding with respect to dividends paid on shares of our common stock, unless, generally, the non-U.S. holder certifies under penalties of perjury (usually on IRS Form W-8BEN or W-8BEN-E) that the non-U.S. holder is not a U.S. person or otherwise establishes an exemption. The backup withholding rate is currently 24%. Dividends that are paid to non-U.S. holders subject to the withholding of U.S. federal income tax, as described above under the heading "Distributions on common stock" generally will be exempt from U.S. backup withholding.

Additional rules relating to information reporting requirements and backup withholding with respect to payments of the proceeds from the disposition of shares of our common stock are as follows:

- If the proceeds are paid to or through the U.S. office of a broker, the proceeds generally will be subject to backup withholding and information reporting, unless the non-U.S. holder certifies under penalties of perjury (usually on IRS Form W-8BEN or W-8BEN-E) that the non-U.S. holder is not a U.S. person and satisfies certain other requirements or otherwise establishes an exemption.

- If the proceeds are paid to or through a non-U.S. office of a broker that is not a U.S. person and is not a foreign person with certain specified U.S. connections, which we refer to below as a "U.S.-related person," information reporting and backup withholding generally will not apply.

- If the proceeds are paid to or through a non-U.S. office of a broker that is a U.S. person or a U.S.-related person, the proceeds generally will be subject to information reporting (but not to backup withholding), unless the non-U.S. holder certifies under penalties of perjury (usually on IRS Form W-8BEN or W-8BEN-E) that the non-U.S. holder is not a U.S. person. A "U.S.-related person" includes (i) an entity classified as a "controlled foreign corporation" for U.S. federal income tax purposes, (ii) a foreign person, 50% or more of whose gross income from certain periods is effectively connected with a U.S. trade or business, or (iii) a foreign partnership if at any time during its tax year (a) one or more of its partners are U.S. persons who, in the aggregate, hold more than 50% of the income or capital interests of the partnership or (b) the foreign partnership is engaged in a U.S. trade or business.

Backup withholding is not an additional tax. Any amounts withheld from a non-U.S. holder under the backup withholding rules may be allowed as a refund or a credit against the non-U.S. holder's U.S. federal income tax liability, if any, provided that the non-U.S. holder timely furnishes the required information to the IRS. Non-U.S. holders should consult their own tax advisors regarding the application of the information reporting and backup withholding rules to them.

Foreign Account Tax Compliance Act

Sections 1471 to 1474 of the Code (commonly referred to as the Foreign Account Tax Compliance Act, or FATCA) generally impose withholding tax on certain types of payments made to "foreign financial institutions" (as defined in the Code) and other non-U.S. entities unless those institutions and entities meet additional certification, information reporting and other requirements. FATCA generally imposes a 30% withholding tax on dividends on, or gross proceeds from the sale or other disposition of, our common

stock paid to a foreign financial institution unless the foreign financial institution enters into an agreement with the U.S. Treasury to, among other things, (i) undertake to identify accounts held by certain U.S. persons (including certain equity and debt holders of such institution) or by U.S.-owned foreign entities, (ii) annually report certain information about such accounts, and (iii) withhold 30% on payments to account holders whose actions prevent it from complying with these reporting and other requirements. In addition, subject to certain exceptions, FATCA imposes a 30% withholding tax on the same types of payments to a "non-financial foreign entity" (as defined in the Code) unless the entity certifies that it does not have any substantial U.S. owners (which generally include any U.S. persons who directly or indirectly own more than 10% of the entity) or furnishes identifying information regarding each such substantial U.S. owner or agrees to report that information to the IRS. These withholding taxes will be imposed on dividends paid on our common stock, and, after December 31, 2018, on gross proceeds from sales or other dispositions of our common stock. Withholding under FATCA generally will not be reduced or limited by bilateral income tax treaties. However, intergovernmental agreements between the United States and other countries with respect to the implementation of FATCA and non-U.S. laws, regulations and other authorities enacted or issued with respect to those intergovernmental agreements may modify the FATCA requirements described above. Non-U.S. holders should consult their own tax advisors regarding the possible implications of FATCA on their investment in our common stock and the entities through which they hold our common stock, including, without limitation, the process and deadlines for meeting the applicable requirements to prevent the imposition of the 30% withholding tax under FATCA.

Shares eligible for future sale

Prior to this offering, there has been no public market for shares of our common stock and a liquid trading market for our common stock may not develop or be sustained after this offering. We cannot predict the effect, if any, that future sales of shares of common stock, or the availability for future sale of shares of common stock, will have on the market price of shares of our common stock prevailing from time to time. The sale of substantial amounts of shares of our common stock in the public market, or the perception that such sales could occur, could harm the prevailing market price of shares of our common stock.

As of July 9, 2018, 5,007,485 shares of our common stock were outstanding, including 26,258 shares of our common A stock, which we will repurchase at a nominal value and cancel immediately prior to the completion of this offering. Upon completion of the conversion of our preferred stock into shares of our common stock and the repurchase and cancellation of all outstanding shares of our common A stock, 24,138,587 shares of our common stock will be outstanding. In addition, as of July 9, 2018, we had outstanding options to purchase 2,502,530 shares of our common stock under our 2017 Plan at a weighted average exercise price of $2.72 per share, 660,368 of which were exercisable as of that date.

Upon the completion of this offering, we will have a total of 30,838,587 shares of our common stock outstanding, or 31,843,587 shares of common stock if the underwriters exercise in full their option to purchase additional shares of common stock, based on an assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus. All of these shares of common stock will have been sold in this offering and will be freely tradable without restriction or further registration under the Securities Act by persons other than our "affiliates." Under the Securities Act, an "affiliate" of an issuer is a person who directly or indirectly controls, is controlled by or is under common control with that issuer.

As of July 9, 2018, 660,368 shares of common stock were issuable upon the exercise of outstanding stock options. In addition, 3,617,968 shares of common stock may be granted under our 2018 Plan and 348,612 shares of common stock may be purchased under our ESPP. In addition, effective upon the completion of this offering, we expect to grant to certain of our employees and directors options to purchase approximately 1,147,500 shares of our common stock under our 2018 Plan at an exercise price equal to the initial public offering price listed on the cover page of this prospectus. See "Executive and director compensation—Employee benefit and stock plans—2018 Omnibus Incentive Compensation Plan" and "Executive and director compensation—Employee benefit and stock Plans—Employee stock purchase plan." We intend to file one or more registration statements on Form S-8 under the Securities Act to register shares of common stock or securities convertible into or exchangeable for shares of common stock issued under or covered by our 2017 Plan, 2018 Plan, and ESPP. Any such Form S-8 registration statements will automatically become effective upon filing, subject to vesting restrictions, the lock-up agreements described herein and Rule 144 limitations applicable to affiliates. Accordingly, shares of common stock registered under such registration statements will be available for sale in the open market. We expect that the initial registration statement on Form S-8 will cover all shares of common stock.

Our certificate of incorporation authorizes us to issue additional shares of common stock and options, rights, warrants and appreciation rights relating to common stock for the consideration and on the terms and conditions established by our board of directors in its sole discretion. In accordance with the DGCL and the provisions of our certificate of incorporation, we may also issue preferred stock that has designations, preferences, rights, powers and duties that are different from, and may be senior to, those applicable to shares of common stock. See "Description of capital stock."

Registration rights

Following the completion of this offering, the holders of approximately 19.7 million shares of our common stock, or their transferees, will be entitled to registration rights with respect to registration of the resale of such shares under the Securities Act pursuant to the amended and restated investors' rights agreement, by and among us and certain of our investors. See "Certain relationships and related party transactions—Stockholder agreements—Investors' rights agreement" for more information.

Lock-Up agreements

We, each of our directors and officers and holders of substantially all of our fully diluted outstanding capital stock have agreed to certain restrictions on our and their ability to sell additional shares of our common stock for a period of 180 days after the date of this prospectus. We and they have agreed not to directly or indirectly offer for sale, sell, contract to sell, grant any option for the sale of, or otherwise issue or dispose of, any shares of our common stock, options or warrants to purchase shares of our common stock, or any related security or instrument without the prior written consent of each of J.P. Morgan Securities LLC and Leerink Partners LLC. The agreements provide exceptions for (a) sales to the underwriters in connection with this offering, (b) our sales in connection with existing incentive plans and (c) certain other exceptions. J.P. Morgan Securities LLC and Leerink Partners LLC in their sole discretion may release any of the securities subject to these lock-up agreements at any time. If the restrictions under the lock-up agreements are waived, shares of our common stock may become available for resale into the market, subject to applicable law, which could reduce the market price for our common stock. See "Underwriting."

Rule 144

In general, under Rule 144 a person (or persons whose shares are aggregated) who may be deemed our affiliate is entitled to sell within any three-month period a number of restricted securities that does not exceed the greater of 1% of the then outstanding shares of common stock and the average weekly trading volume during the four calendar weeks preceding each such sale, provided that at least six months has elapsed since such shares of common stock were acquired from us or any affiliate of ours and certain manner of sale, notice requirements and requirements as to availability of current public information about us are satisfied. Any person who is deemed to be our affiliate must also comply with such provisions of Rule 144 (other than the six-month holding period requirement) in order to sell shares of common stock which are not restricted securities (such as shares of common stock acquired by affiliates through purchases in the open market following this offering). A person who is not our affiliate, and who has not been our affiliate at any time during the 90 days preceding any sale, is entitled to sell shares of common stock (i) subject only to the requirements as to availability of current public information about us, provided that a period of at least six months has elapsed since the shares of common stock were acquired from us or any affiliate of ours, and (ii) without regard to the requirements as to availability of current public information about us or any other requirement of Rule 144, provided that at least one year has elapsed since the shares of common stock were acquired from us or any affiliate of ours.

Stock options and restricted stock

See "Shares eligible for future sale." For a more complete discussion of our stock plans, see "Executive and director compensation—Employee benefit and stock plans."

Rule 701

Rule 701 under the Securities Act, as in effect on the date of this prospectus, permits resales of shares in reliance upon Rule 144 but without compliance with certain restrictions of Rule 144, including the holding period requirement. Most of our employees, executive officers or directors who purchased shares under a written compensatory plan or contract may be entitled to rely on the resale provisions of Rule 701, but all holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling their shares. However, substantially all Rule 701 shares are subject to lock-up agreements as described below and under "Underwriting" included elsewhere in this prospectus and will become eligible for sale upon the expiration of the restrictions set forth in those agreements.

Underwriting

We are offering the shares of common stock described in this prospectus through a number of underwriters. J.P. Morgan Securities LLC and Leerink Partners LLC are acting as book-running managers of the offering and as representatives of the underwriters. We have entered into an underwriting agreement with the representatives. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the initial public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus, the number of shares of common stock listed next to its name in the following table:

Name	Number of shares
J.P. Morgan Securities LLC	
Leerink Partners LLC	
BMO Capital Markets Corp.	
Total	6,700,000

The underwriters are committed to purchase all the common shares offered by us if they purchase any shares. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the common shares directly to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers at that price less a concession not in excess of $ per share. Any such dealers may resell shares to certain other brokers or dealers at a discount of up to $ per share from the initial public offering price. After the initial offering of the shares to the public, the offering price and other selling terms may be changed by the underwriters. Sales of shares made outside of the United States may be made by affiliates of the underwriters. The offering of the shares by the underwriters is subject to receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part.

Several of our existing stockholders (or their affiliates), including stockholders affiliated with certain of our directors, have indicated an interest in purchasing up to an aggregate of approximately $40.0 million in shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters could determine to sell more, fewer or no shares to any of these stockholders and any of these stockholders could determine to purchase more, fewer or no shares in this offering. The underwriters will receive the same underwriting discount on any shares purchased by these stockholders as they will on any other shares sold to the public in this offering.

The underwriters have an option to buy up to 1,005,000 additional shares of common stock from us to cover sales of shares by the underwriters that exceed the number of shares specified in the table above. The underwriters have 30 days from the date of this prospectus to exercise this option to purchase additional shares. If any shares are purchased with this option to purchase additional shares, the underwriters will purchase shares in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting fee is equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting fee is $ per share. The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Without option to purchase additional shares exercise	With full option to purchase additional shares exercise
Per share	$	$
Total	$	$

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be approximately $2.7 million. We have agreed to reimburse the underwriters for certain expenses related to clearance of this offering with the Financial Industry Regulatory Authority, or FINRA.

A prospectus in electronic format may be made available on the web sites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The underwriters may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

We have agreed that we will not (i) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise dispose of, directly or indirectly, or file with the SEC a registration statement under the Securities Act relating to, any shares of our common stock or securities convertible into or exchangeable or exercisable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing, or (ii) enter into any swap or other arrangement that transfers all or a portion of the economic consequences associated with the ownership of any shares of common stock or any such other securities (regardless of whether any of these transactions are to be settled by the delivery of shares of common stock or such other securities, in cash or otherwise), in each case without the prior written consent of J.P. Morgan Securities LLC and Leerink Partners LLC for a period of 180 days after the date of this prospectus, subject to certain limited exceptions set forth in the underwriting agreement.

Our directors, executive officers and holders of substantially all of our fully diluted outstanding capital stock have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which each of these persons or entities, with certain limited exceptions, for a period of 180 days after the date of this prospectus, may not, without the prior written consent of J.P. Morgan Securities LLC and Leerink Partners LLC, (i) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock (including, without limitation, common stock or such other securities which may be deemed to be beneficially owned by such directors, executive officers, managers and members in accordance with the

rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant) or (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the common stock or such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of common stock or such other securities, in cash or otherwise, or (iii) make any demand for or exercise any right with respect to the registration of any shares of our common stock or any security convertible into or exercisable or exchangeable for our common stock.

We have agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act.

We have applied to have the common stock listed on Nasdaq under the symbol "REPL."

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of the common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be "covered" shorts, which are short positions in an amount not greater than the underwriters' option to purchase additional shares referred to above, or may be "naked" shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which the underwriters may purchase shares through the option to purchase additional shares. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on Nasdaq, in the over-the-counter market or otherwise.

Prior to this offering, there has been no public market for our common stock. The initial public offering price will be determined by negotiations between us and the representatives of the underwriters. In determining the initial public offering price, we and the representatives of the underwriters expect to consider a number of factors, including:

- the information set forth in this prospectus and otherwise available to the representatives;

- our prospects and the history and prospects for the industry in which we compete;
- an assessment of our management;
- our prospects for future earnings;
- the general condition of the securities market at the time of this offering;
- the recent market prices of, and demand for, publicly traded common stock of generally comparable companies; and
- other factors deemed relevant by the underwriters and us.

Neither we nor the underwriters can assure investors that an active trading market will develop for our common stock, or that the shares will trade in the public market at or above the initial public offering price.

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Selling restrictions

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive, or a Relevant Member State, an offer to the public of any shares of our common stock may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any shares of our common stock may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares of our common stock shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares of our common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of our common stock to be offered so as to enable an investor to decide to purchase any shares of our common stock, as the same may be varied in

that Member State by any measure implementing the Prospectus Directive in that Member State, the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State, and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

United Kingdom

Each underwriter has represented and agreed that:

- it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000, or FSMA, received by it in connection with the issue or sale of the shares of our common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and

- it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our common stock in, from or otherwise involving the United Kingdom.

Hong Kong

The shares of our common stock have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the shares of our common stock has been or may be issued or has been or may be in the possession of any person for the purposes of issuance, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares of our common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares of our common stock may not be circulated or distributed, nor may the shares of our common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares of our common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

- a trust (where the trustee is not an accredited investor) the sole purpose of which is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of our common stock pursuant to an offer made under Section 275 of the SFA except:

- to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

- where no consideration is or will be given for the transfer;

- where the transfer is by operation of law;

- as specified in Section 276(7) of the SFA; or

- as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Japan

No registration pursuant to Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended), or the FIEL, has been made or will be made with respect to the solicitation of the application for the acquisition of the shares of our common stock.

Accordingly, the shares of our common stock have not been, directly or indirectly, offered or sold and will not be, directly or indirectly, offered or sold in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan) or to others for re-offering or re-sale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan except pursuant to an exemption from the registration requirements, and otherwise in compliance with, the FIEL and the other applicable laws and regulations of Japan.

For Qualified Institutional Investors, or QII

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of our common stock constitutes either a "QII only private placement" or a "QII only secondary distribution" (each as described in Paragraph 1, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of our common stock. The shares of our common stock may only be transferred to QIIs.

For Non-QII Investors

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of our common stock constitutes either a "small number private placement" or a "small number private secondary distribution" (each as is described in Paragraph 4, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of our common stock. The shares of our common stock may only be transferred en bloc without subdivision to a single investor.

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission, or ASIC, in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001, or the Corporations Act, and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons, or the Exempt Investors, who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional investors" (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take into account the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate for their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Dubai International Financial Centre

This prospectus relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority, or DFSA. This prospectus is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth herein and has no responsibility for the prospectus. The shares to which this prospectus relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus you should consult an authorized financial advisor.

Switzerland

The shares of our common stock may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland. Neither this document nor any other offering or marketing material relating to the offering, us or the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, or FINMA, and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA.

The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Canada

The shares of our common stock may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the shares of our common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Israel

In the State of Israel this prospectus shall not be regarded as an offer to the public to purchase shares of common stock under the Israeli Securities Law, 5728-1968, which requires a prospectus to be published and authorized by the Israel Securities Authority, if it complies with certain provisions of Section 15 of the Israeli Securities Law, 5728-1968, including, inter alia, if: (i) the offer is made, distributed or directed to not more than 35 investors, subject to certain conditions (the "Addressed Investors"); or (ii) the offer is made, distributed or directed to certain qualified investors defined in the First Addendum of the Israeli Securities Law, 5728-1968, subject to certain conditions (the "Qualified Investors"). The Qualified Investors shall not be taken into account in the count of the Addressed Investors and may be offered to purchase securities in addition to the 35 Addressed Investors. The company has not and will not take any action that would require it to publish a prospectus in accordance with and subject to the Israeli Securities

Law, 5728-1968. We have not and will not distribute this prospectus or make, distribute or direct an offer to subscribe for our common stock to any person within the State of Israel, other than to Qualified Investors and up to 35 Addressed Investors.

Qualified Investors may have to submit written evidence that they meet the definitions set out in of the First Addendum to the Israeli Securities Law, 5728-1968. In particular, we may request, as a condition to be offered common stock, that Qualified Investors will each represent, warrant and certify to us and/or to anyone acting on our behalf: (i) that it is an investor falling within one of the categories listed in the First Addendum to the Israeli Securities Law, 5728-1968; (ii) which of the categories listed in the First Addendum to the Israeli Securities Law, 5728-1968 regarding Qualified Investors is applicable to it; (iii) that it will abide by all provisions set forth in the Israeli Securities Law, 5728-1968 and the regulations promulgated thereunder in connection with the offer to be issued common stock; (iv) that the shares of common stock that it will be issued are, subject to exemptions available under the Israeli Securities Law, 5728-1968: (a) for its own account; (b) for investment purposes only; and (c) not issued with a view to resale within the State of Israel, other than in accordance with the provisions of the Israeli Securities Law, 5728-1968; and (v) that it is willing to provide further evidence of its Qualified Investor status. Addressed Investors may have to submit written evidence in respect of their identity and may have to sign and submit a declaration containing, inter alia, the Addressed Investor's name, address and passport number or Israeli identification number.

Other relationships

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their respective affiliates may in the future perform various financial advisory and investment banking services for us, for which they may receive customary fees and expenses.

In addition, in the ordinary course of business, the underwriters and their respective affiliates may make or hold a broad array of investments including serving as counterparties to certain derivative and hedging arrangements and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve our securities and/or instruments. The underwriters and their respective affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

In a series of related transactions in August and September 2017, entities affiliated with Leerink Partners LLC purchased an aggregate of 7,054 shares of our series B preferred stock on the same terms as the other investors in the series B financing. These shares will convert into 70,164 shares of our common stock upon the completion of this offering.

Legal matters

The validity of the shares of common stock offered hereby will be passed upon for us by Morgan, Lewis & Bockius LLP. Certain legal matters in connection with this offering will be passed upon for the underwriters by Cravath, Swaine & Moore LLP.

Experts

The financial statements as of March 31, 2018 and 2017 and for the years then ended included in this prospectus have been so included in reliance on the report (which contains an explanatory paragraph relating to the Company's requirement of additional financing to fund future operations as described in Note 1 to the consolidated financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

Where you can find more information

We have filed with the SEC a registration statement on Form S-1 (including exhibits, schedules, and amendments) under the Securities Act with respect to the shares of common stock offered by this prospectus. This prospectus, which constitutes a part of that registration statement, does not contain all the information set forth in the registration statement or the exhibits and schedules that are part of the registration statement. Some items included in the registration statement are omitted from the prospectus in accordance with the rules and regulations of the SEC. For further information about us and the shares of common stock to be sold in this offering, you should refer to the registration statement and the accompanying exhibits and schedules filed therewith. Statements contained in this prospectus relating to the contents of any contract, agreement or other document that is filed as an exhibit to the registration statement are not necessarily complete and are qualified in all respects by the complete text of the applicable contract, agreement or other document, a copy of which has been filed as an exhibit to the registration statement. Whenever this prospectus refers to any contract, agreement, or other document, you should refer to the exhibits that are a part of the registration statement for a copy of the contract, agreement, or document.

You may read and copy all or any portion of the registration statement and the accompanying exhibits or any other information we file at the SEC's public reference room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You can request copies of these documents, upon payment of a duplicating fee, by writing to the SEC. Please call the SEC at 1-800-SEC-0330 for further information about the operation of the public reference rooms. Our SEC filings, including the registration statement, are also available to you on the SEC's Website (*http://www.sec.gov*).

Upon the completion of this offering, we will become subject to the information and periodic reporting requirements of the Exchange Act. Under the Exchange Act, we will file annual, quarterly and current reports, as well as proxy statements and other periodic information with the SEC. These periodic reports, proxy statements, and other information will be available for inspection and copying at the SEC's Public Reference Room and the website of the SEC referred to above.

Index to consolidated financial statements

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
Replimune Group, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Replimune Group, Inc. and its subsidiaries as of March 31, 2018 and 2017, and the related consolidated statements of operations, of comprehensive loss, of convertible preferred stock and stockholders' deficit and of cash flows for the years then ended, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of March 31, 2018 and 2017, and the results of their operations and their cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Emphasis of Matter

As discussed in Note 1 to the consolidated financial statements, the Company will require additional financing to fund future operations. Management's plans in regard to this matter are described in Note 1.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
June 11, 2018, except for the effects of the forward stock split discussed in Note 16
to the consolidated financial statements, as to which the date is July 10, 2018

We have served as the Company's auditor since 2018.

Replimune Group, Inc.

Consolidated balance sheets

(Amounts in thousands, except share and per share amounts)	March 31, 2017	March 31, 2018	Pro forma March 31, 2018 (unaudited)
Assets			
Current assets:			
Cash and cash equivalents	$ 20,594	$ 17,583	$ 17,583
Short-term investments	—	43,968	43,968
Research and development incentives receivable	1,407	2,389	2,389
Prepaid expenses and other current assets	401	763	763
Total current assets	22,402	64,703	64,703
Property, plant and equipment, net	342	370	370
Restricted cash	75	78	78
Total assets	$ 22,819	$ 65,151	$ 65,151
Liabilities, Convertible Preferred Stock and Stockholders' Equity (Deficit)			
Current liabilities:			
Accounts payable	$ 323	$ 1,993	$ 1,993
Accrued expenses and other current liabilities	1,662	3,171	3,171
Total current liabilities	1,985	5,164	5,164
Deferred rent, net of current portion	70	52	52
Warrant liability	670	1,642	—
Total liabilities	2,725	6,858	5,216
Commitments and contingencies (Note 13)			
Convertible preferred stock (series seed, A and B), $0.001 par value; 1,114,553 shares authorized as of March 31, 2017 and 1,975,968 shares authorized as of March 31, 2018; 1,064,553 shares issued and outstanding as of March 31, 2017 and 1,925,968 shares issued and outstanding as of March 31, 2018; no shares issued or outstanding, pro forma (unaudited) as of March 31, 2018	31,609	86,361	—
Stockholders' Equity (Deficit):			
Common stock, $0.001 par value; 27,314,288 shares authorized as of March 31, 2017 and 27,314,288 shares authorized (inclusive of 26,258 shares of common A stock) as of March 31, 2018; 4,973,439 shares issued and outstanding as of March 31, 2017 and 5,007,485 issued and outstanding (inclusive of 26,258 shares of common A stock) as of March 31, 2018; 24,138,587 shares issued and outstanding, pro forma (unaudited) as of March 31, 2018	5	5	24
Additional paid-in capital	259	1,097	89,081
Accumulated deficit	(9,230)	(28,932)	(28,932)
Accumulated other comprehensive loss	(2,549)	(238)	(238)
Total stockholders' equity (deficit)	(11,515)	(28,068)	59,935
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	$ 22,819	$ 65,151	$ 65,151

The accompanying notes are an integral part of these consolidated financial statements.

Replimune Group, Inc.

Consolidated statements of operations

(Amounts in thousands, except share and per share amounts)	Year ended March 31, 2017	2018
Operating expenses:		
Research and development	$ 6,936	$ 13,516
General and administrative	2,711	5,713
Total operating expenses	9,647	19,229
Loss from operations	(9,647)	(19,229)
Other income (expense):		
Research and development incentives	1,442	2,267
Interest income	25	288
Change in fair value of warrant liability	(150)	(972)
Other income (expense), net	626	(2,056)
Total other income (expense), net	1,943	(473)
Net loss	(7,704)	(19,702)
Net loss attributable to common stockholders	$ (7,704)	$ (19,702)
Net loss per share attributable to common stockholders, basic and diluted	$ (1.55)	$ (3.96)
Weighted average common shares outstanding, basic and diluted	4,973,439	4,978,539
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)		$ (0.87)
Pro forma weighted average common shares outstanding, basic and diluted (unaudited)		21,506,697

The accompanying notes are an integral part of these consolidated financial statements.

Replimune Group, Inc.

Consolidated statements of comprehensive loss

(Amounts in thousands)	Year ended March 31, 2017	2018
Net loss	$ (7,704)	$ (19,702)
Other comprehensive income (loss):		
Foreign currency translation gain (loss)	(1,437)	2,376
Net unrealized loss on short-term investments, net of tax	—	(65)
Comprehensive loss	$ (9,141)	$ (17,391)

The accompanying notes are an integral part of these consolidated financial statements.

Replimune Group, Inc.

Consolidated statements of convertible preferred stock and stockholders' deficit

(Amounts in thousands, except share amounts)	Convertible preferred stock		Common stock		Additional paid-in capital	Accumulated deficit	Accumulated other comprehensive Loss	Total stockholders' deficit
	Shares	Amount	Shares	Amount				
Balances as of March 31, 2016	632,276	$ 16,609	4,973,439	$ 5	$ 51	$ (1,526)	$ (1,112)	$ (2,582)
Issuance of series A convertible preferred stock	432,277	15,000	—	—	—	—	—	—
Foreign currency translation adjustment	—	—	—	—	—	—	(1,437)	(1,437)
Stock-based compensation expense	—	—	—	—	208	—	—	208
Net loss	—	—	—	—	—	(7,704)	—	(7,704)
Balances as of March 31, 2017	1,064,553	31,609	4,973,439	5	259	(9,230)	(2,549)	(11,515)
Issuance of series B convertible preferred stock, net of $198 issuance costs	861,415	54,752	—	—	—	—	—	—
Issuance of common A stock	—	—	26,258	—	—	—	—	—
Foreign currency translation adjustment	—	—	—	—	—	—	2,376	2,376
Unrealized loss on short-term investments, net of tax	—	—	—	—	—	—	(65)	(65)
Stock options in exchange for consulting services	—	—	7,788	—	26	—	—	26
Stock-based compensation expense	—	—	—	—	812	—	—	812
Net loss	—	—	—	—	—	(19,702)	—	(19,702)
Balances as of March 31, 2018	1,925,968	$ 86,361	5,007,485	$ 5	$ 1,097	$ (28,932)	$ (238)	$ (28,068)

The accompanying notes are an integral part of these consolidated financial statements.

Replimune Group, Inc.

Consolidated statements of cash flows

(Amounts in thousands)	Year ended March 31, 2017	2018
Cash flows from operating activities:		
Net loss	$ (7,704)	$ (19,702)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation expense	208	812
Depreciation and amortization	122	109
Change in fair value of warrant liability	150	972
Stock options in exchange for consulting services	—	26
Net amortization of premiums and discounts on short-term investments	—	(123)
Changes in operating assets and liabilities:		
Research and development incentives receivable	(1,210)	(767)
Prepaid expenses and other current assets	(325)	(305)
Accounts payable	203	1,596
Accrued expenses and other current liabilities	1,406	1,393
Deferred rent	73	(25)
Net cash used in operating activities	(7,077)	(16,014)
Cash flows from investing activities:		
Purchases of property, plant and equipment	(238)	(136)
Purchases of short-term investments	—	(52,463)
Proceeds from maturities of short-term investments	—	8,553
Net cash used in investing activities	(238)	(44,046)
Cash flows from financing activities:		
Proceeds from issuance of series A convertible preferred stock	15,000	—
Proceeds from issuance of series B convertible preferred stock, net of issuance costs	—	54,752
Net cash provided by financing activities	15,000	54,752
Effect of exchange rate changes on cash and cash equivalents	(1,419)	2,297
Net increase (decrease) in cash and cash equivalents	6,266	(3,011)
Cash and cash equivalents at beginning of year	14,328	20,594
Cash and cash equivalents at end of year	$ 20,594	$ 17,583

The accompanying notes are an integral part of these consolidated financial statements.

Replimune Group, Inc.

Notes to consolidated financial statements

(Amounts in thousands, except share and per share amounts)

1. Nature of the business

Replimune Group, Inc. (the "Company") is a clinical-stage biotechnology company focused on the development of oncolytic immunotherapies to treat cancer.

Replimune Limited ("Replimune UK") was incorporated in 2015 under the laws of England, and was the sole shareholder of Replimune, Inc. ("Replimune US"), a Delaware corporation. On July 5, 2017, Replimune Group, Inc., a Delaware corporation, was incorporated and on July 10, 2017 the shareholders of Replimune UK effected a share-for-share exchange pursuant to which they exchanged their outstanding shares in Replimune UK for shares in Replimune Group, Inc., on a one-for-one basis. In addition, the holders of warrants and stock options to purchase Replimune UK capital stock canceled their warrants to purchase shares of series seed preferred stock and stock options in Replimune UK and were issued replacement warrants to purchase shares of series seed preferred stock and stock options to acquire Replimune Group, Inc. capital stock on a one-for-one basis. These transactions are collectively referred to as the reorganization. Upon completion of the reorganization, the historical consolidated financial statements of Replimune UK became the historical consolidated financial statements of Replimune Group, Inc. because the reorganization was accounted for similar to a reorganization of entities under common control due to the high degree of common ownership of Replimune UK and Replimune Group, Inc. and lack of economic substance to the transaction. The Company concluded that the reorganization resulted in no change in the material rights and preferences of each respective class of equity interests and no change in the fair value of each respective class of equity interests before and after the reorganization. On December 8, 2017, Replimune UK transferred all outstanding shares of its wholly owned subsidiary, Replimune US to Replimune Group, Inc. Replimune Group. Inc., a Delaware corporation, is the sole shareholder of Replimune UK, Replimune US and Replimune Securities Corporation, a Massachusetts corporation that was incorporated in November 2017.

The Company is subject to risks and uncertainties common to early-stage companies in the biotechnology industry, including, but not limited to, development by competitors of new technological innovations, dependence on key personnel, protection of proprietary technology, compliance with government regulations and the ability to secure additional capital to fund operations. Product candidates currently under development will require significant additional research and development efforts, including preclinical and clinical testing and regulatory approval, prior to commercialization. These efforts require significant amounts of additional capital, adequate personnel and infrastructure and extensive compliance and reporting capabilities. Even if the Company's product development efforts are successful, it is uncertain when, if ever, the Company will realize significant revenue from product sales.

The accompanying consolidated financial statements have been prepared on the basis of continuity of operations, realization of assets and the satisfaction of liabilities and commitments in the ordinary course of business. Through March 31, 2018, the Company has funded its operations primarily with proceeds from the sale of convertible preferred stock. The Company has incurred recurring losses since its inception, including net losses of $7,704 for the year ended March 31, 2017 and $19,702 for the year ended March 31, 2018. In addition, as of March 31, 2018, the Company had an accumulated deficit of $28,932. The Company expects to continue to generate operating losses for the foreseeable future. As of June 11, 2018, the

issuance date of the consolidated financial statements for the year ended March 31, 2018, the Company expects that its cash and cash equivalents and short-term investments will be sufficient to fund its operating expenses and capital expenditure requirements through at least 12 months from the issuance of the consolidated financial statements. The future viability of the Company beyond that point is dependent on its ability to raise additional capital to finance its operations.

The Company is seeking to complete an initial public offering ("IPO") of its common stock. Upon the completion of a qualified public offering on specified terms, the Company's outstanding convertible preferred stock will convert into shares of common stock (see Note 7). In the event the Company does not complete an IPO, the Company will seek additional funding through private equity financings, debt financings or other capital sources, including collaborations with other companies or other strategic transactions. The Company may not be able to obtain funding on acceptable terms, or at all. The terms of any financing may adversely affect the holdings or the rights of the Company's stockholders.

If the Company is unable to obtain funding it could be forced to delay, reduce or eliminate some or all of its research and development programs, product portfolio expansion or commercialization efforts, which could adversely affect its business prospects, or it may be unable to continue operations. Although management continues to pursue these plans, there is no assurance that the Company will be successful in obtaining sufficient funding on terms acceptable to the Company to fund continuing operations, if at all.

2. Summary of significant accounting policies

Principles of consolidation

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") and include the accounts of the Company and its wholly owned subsidiaries, Replimune UK, Replimune US and Replimune Securities Corporation, after elimination of all intercompany accounts and transactions. The consolidated financial statements reflect the capital as if Replimune Group, Inc. had been in existence for all periods presented.

Use of estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of expenses during the reporting periods. Significant estimates and assumptions reflected in these consolidated financial statements include, but are not limited to, the accrual for research and development expenses and the valuation of common stock and stock-based awards. The Company bases its estimates on historical experience, known trends and other market-specific or other relevant factors that it believe to be reasonable under the circumstances. Estimates are periodically reviewed in light of reasonable changes in circumstances, facts and experience. Changes in estimates are recorded in the period in which they become known. Actual results could differ from those estimates or assumptions.

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

Unaudited pro forma information

The accompanying unaudited pro forma consolidated balance sheet as of March 31, 2018 has been prepared to give effect, upon the completion of the proposed IPO, to (i) the conversion of all outstanding shares of convertible preferred stock into 19,157,360 shares of common stock and (ii) all outstanding warrants to purchase shares of series seed preferred stock becoming warrants to purchase shares of common stock, as if the proposed IPO had occurred on March 31, 2018.

In the accompanying consolidated statement of operations, the unaudited pro forma basic and diluted net loss per share attributable to common stockholders for the year ended March 31, 2018 has been prepared to give effect, upon the completion of the proposed IPO, to (i) the conversion of all outstanding shares of convertible preferred stock into shares of common stock and (ii) all outstanding warrants to purchase shares of series seed preferred stock becoming warrants to purchase shares of common stock as if the proposed IPO had occurred on the later of April 1, 2017 or the issuance date of the convertible preferred stock or the warrants.

Foreign currency and currency translation

The functional currency for the Company's wholly owned foreign subsidiary, Replimune UK, is the British Pound. Assets and liabilities of Replimune UK are translated into United States dollars at the exchange rate in effect on the balance sheet date. Revenues and expenses are translated at the average exchange rate in effect during the period. Unrealized translation gains and losses are recorded as a cumulative translation adjustment, which is included in the consolidated statements of convertible preferred stock and stockholders' deficit as a component of accumulated other comprehensive loss. Adjustments that arise from exchange rate changes on transactions denominated in a currency other than the local currency are included in other income (expense), net in the consolidated statements of operations as incurred.

Concentrations of credit risk and of significant suppliers

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash and cash equivalents as well as short-term investments. The Company deposits its cash in financial institutions in amounts that may exceed federally insured limits, and has not experienced any losses on such accounts and does not believe it is exposed to any unusual credit risk beyond the normal credit risk associated with commercial banking relationships.

The Company relies, and expects to continue to rely, on a small number of vendors to manufacture supplies and raw materials for its development programs. These programs could be adversely affected by a significant interruption in these manufacturing services or the availability of raw materials.

Cash and cash equivalents

The Company considers all highly liquid investments with original maturities of three months or less at date of purchase to be cash equivalents. Cash equivalents consisted of money market funds at March 31, 2018. As of March 31, 2017 and 2018, cash equivalents consisted of $0 and $4,130, respectively.

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

Restricted cash

The Company maintains certain minimum balances in segregated bank accounts in connection with its corporate credit cards. As of March 31, 2017 and 2018, restricted cash consisted of $75 and $78, respectively. These amounts have been classified as non-current assets on the Company's consolidated balance sheets.

Short-term investments

The Company's short-term investments are classified as available-for-sale and are carried at fair value, with the unrealized gains and losses reported as a component of accumulated other comprehensive income (loss) in stockholders' equity (deficit). Realized gains and losses and declines in value determined to be other than temporary are based on the specific identification method and are included as a component of other income (expense), net in the consolidated statements of operations.

The Company evaluates its short-term investments with unrealized losses for other-than-temporary impairment. When assessing short-term investments for other-than-temporary declines in value, the Company considers such factors as, among other things, how significant the decline in value is as a percentage of the original cost, how long the market value of the investment has been less than its original cost, the Company's ability and intent to retain the short-term investment for a period of time sufficient to allow for any anticipated recovery in fair value and market conditions in general. If any adjustment to fair value reflects a decline in the value of the short-term investment that the Company considers to be "other than temporary," the Company reduces the short-term investment to fair value through a charge to the consolidated statements of operations. No such adjustments were necessary during the periods presented.

The Company's short-term investments as of March 31, 2017 and 2018 had original maturities of less than one year.

Deferred offering costs

The Company capitalizes certain legal, professional accounting and other third-party fees that are directly associated with in-process equity financings as deferred offering costs until such financings are consummated. After consummation of the equity financing, these costs are recorded in stockholders' equity (deficit) as a reduction of proceeds generated as a result of the offering. Should an in-process equity financing be abandoned, the deferred offering costs will be expensed immediately as a charge to operating expenses in the consolidated statements of operations. The Company did not record any deferred offering costs as of March 31, 2017 or 2018.

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

Property, plant and equipment

Property, plant and equipment are stated at cost, less accumulated depreciation and amortization. Depreciation and amortization expense is recognized using the straight-line method over the estimated useful lives of the respective assets as follows:

	Estimated useful life
Office equipment	5 years
Computer equipment	3 years
Plant and laboratory equipment	5 years
Leasehold improvements	Lesser of lease term or 10 years

Costs for capital assets not yet placed into service are capitalized as construction-in-progress and depreciated in accordance with the above guidelines once placed into service. Upon retirement or sale, the cost of assets disposed of and the related accumulated depreciation are removed from the accounts and any resulting gain or loss is included in loss from operations. Expenditures for repairs and maintenance are charged to expense as incurred.

Impairment of long-lived assets

Long-lived assets consist of property, plant and equipment. Long-lived assets to be held and used are tested for recoverability whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. Factors that the Company considers in deciding when to perform an impairment review include significant underperformance of the business in relation to expectations, significant negative industry or economic trends and significant changes or planned changes in the use of the assets. If an impairment review is performed to evaluate a long-lived asset group for recoverability, the Company compares forecasts of undiscounted cash flows expected to result from the use and eventual disposition of the long-lived asset group to its carrying value. An impairment loss would be recognized when estimated undiscounted future cash flows expected to result from the use of an asset group are less than its carrying amount. The impairment loss would be based on the excess of the carrying value of the impaired asset group over its fair value, determined based on discounted cash flows. To date, the Company has not recorded any impairment losses on long-lived assets.

Deferred rent

The Company recognizes rent expense on a straight-line basis over the respective lease terms and has recorded deferred rent for rent expense incurred but not yet paid.

Fair value measurements

Certain assets and liabilities of the Company are carried at fair value under GAAP. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

- Level 1—Quoted prices in active markets for identical assets or liabilities.
- Level 2—Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.
- Level 3—Unobservable inputs that are supported by little or no market activity that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

The Company's short-term investments, cash equivalents and warrant liability are carried at fair value, determined according to the fair value hierarchy described above (see Note 3). The carrying values of research and development incentives receivable, other current assets, accounts payable and accrued expenses and other current liabilities approximate their fair values due to the short-term nature of these assets and liabilities.

Warrant liability

The Company classifies warrants to purchase shares of series seed preferred stock (see Note 8) as a liability on its consolidated balance sheets as these warrants to purchase shares of series seed preferred stock are free-standing financial instruments that may require the Company to transfer assets upon exercise. The warrant liability was initially recorded at fair value upon the date of the warrants' issuance and is subsequently remeasured to fair value at each reporting date. Changes in the fair value of the warrant liability are recognized as a component of other income (expense), net in the consolidated statements of operations. Changes in the fair value of the warrant liability will continue to be recognized until the warrants to purchase shares of series seed preferred stock are exercised, expire or qualify for equity classification.

The Company utilizes the Black-Scholes option-pricing model, which incorporates assumptions and estimates, to value the warrant liability. The Company assesses these assumptions and estimates on a quarterly basis as additional information impacting assumptions is obtained. Estimates and assumptions impacting the fair value measurement include the expected stock price volatility, the expected term of the warrant, the risk-free interest rate for a period that approximates the expected term of the warrant, and the Company's expected dividend yield (see Note 3).

Segment information

The Company manages its operations as a single operating segment for the purposes of assessing performance and making operating decisions. The Company's current focus is on developing oncolytic immunotherapies for the treatment of cancer.

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

Research and development costs

Research and development costs are expensed as incurred. Research and development expenses consist of costs incurred in performing research and development activities, including salaries, stock-based compensation and benefits, facilities costs and laboratory supplies, depreciation and external costs of outside vendors engaged to conduct preclinical development, clinical development activities and clinical trials as well as to manufacture clinical trial materials. Non-refundable prepayments for goods or services that will be used or rendered for future research and development activities are deferred and capitalized. Such amounts are recognized as an expense as the goods are delivered or the related services are performed, or until it is no longer expected that the goods will be delivered or the services rendered.

Research contract costs and accruals

The Company has entered into various research and development-related contracts with companies both inside and outside of the United States. These agreements are generally cancelable, and related costs are recorded as research and development expenses as incurred. The Company records accruals for estimated ongoing research costs. When evaluating the adequacy of the accrued liabilities, the Company analyzes progress of the studies or clinical trials, including the phase or completion of events, invoices received and contracted costs. Significant judgments and estimates are made in determining the accrued balances at the end of any reporting period. Actual results could differ from the Company's estimates. The Company's historical accrual estimates have not been materially different from the actual costs.

Patent costs

All patent-related costs incurred in connection with filing and prosecuting patent applications are expensed as incurred due to the uncertainty about the recovery of the expenditure. Amounts incurred are classified as general and administrative expenses.

Stock-based compensation

The Company measures all stock-based awards granted to employees and directors based on the fair value on the date of the grant and recognizes compensation expense for those awards over the requisite service period, which is generally the vesting period of the respective award. The fair value of each stock option grant is estimated on the date of grant using the Black-Scholes option-pricing model, which requires inputs based on certain subjective assumptions, including the expected stock price volatility, the expected term of the option, the risk-free interest rate for a period that approximates the expected term of the option, and the Company's expected dividend yield (see Note 10). Forfeitures are accounted for as they occur. To date, the Company has issued stock-based awards with only service-based vesting conditions and records the expense for these awards using the straight-line method.

For stock-based awards granted to consultants and non-employees, compensation expense is recognized over the shorter of the vesting period or the period during which services are rendered by such consultants and non-employees until completed. At the end of each financial reporting period prior to completion of the service, the fair value of these awards is remeasured using the then-current fair value of the Company's common stock and updated assumption inputs in the Black-Scholes option-pricing model.

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

The Company classifies stock-based compensation expense in its consolidated statements of operations in the same manner in which the award recipient's payroll costs are classified or in which the award recipient's service payments are classified.

Research and development incentives and receivable

The Company, through its subsidiary in the United Kingdom, receives reimbursements of certain research and development expenditures as part of a United Kingdom government's research and development tax reliefs program. Under the program, a percentage of qualifying research and development expenses incurred by the Company's subsidiary in the United Kingdom are reimbursed up to 14.5%.

Management has assessed the Company's research and development activities and expenditures to determine which activities and expenditures are likely to be eligible under the research and development incentive program described above. At each period end, management estimates the reimbursement available to the Company based on available information at the time.

The Company recognizes income from the research and development incentives when the relevant expenditure has been incurred, the associated conditions have been satisfied and there is reasonable assurance that the reimbursement will be received. The Company records these research and development incentives as other income. The research and development incentives receivable represents an amount due in connection with the above program. The Company recorded other income from research and development incentives of $1,442 and $2,267 during the years ended March 31, 2017 and 2018, respectively, in the consolidated statements of operations and a research and development incentives receivable of $1,407 and $2,389 as of March 31, 2017 and 2018, respectively, on the consolidated balance sheets.

Comprehensive loss

Comprehensive loss includes net loss as well as other changes in stockholders' equity (deficit) that result from transactions and economic events other than those with stockholders. For the year ended March 31, 2017, comprehensive loss included $(1,437) of foreign currency translation adjustments. For the year ended March 31, 2018, comprehensive loss included $2,376 of foreign currency translation adjustments and $(65), respectively, of unrealized losses on short-term investments, net of tax.

Income taxes

The Company accounts for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the consolidated financial statements or in the Company's tax returns. Deferred tax assets and liabilities are determined on the basis of the differences between the consolidated financial statements and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes. The Company assesses the likelihood that its deferred tax assets will be recovered from future taxable income and, to the extent it believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of the deferred tax assets will not be realized,

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

a valuation allowance is established through a charge to income tax expense. Potential for recovery of deferred tax assets is evaluated by estimating the future taxable profits expected and considering prudent and feasible tax planning strategies.

The Company accounts for uncertainty in income taxes recognized in the consolidated financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination by the taxing authorities. If the tax position is deemed more-likely-than-not to be sustained, the tax position is then assessed to determine the amount of benefit to recognize in the consolidated financial statements. The amount of the benefit that may be recognized is the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. The provision for income taxes includes the effects of any resulting tax reserves, or unrecognized tax benefits, that are considered appropriate as well as the related net interest and penalties.

Net income (loss) per share

The Company follows the two-class method when computing net income (loss) per share as the Company has issued shares that meet the definition of participating securities. The two-class method determines net income (loss) per share for each class of common and participating securities according to dividends declared or accumulated and participation rights in undistributed earnings. The two-class method requires income available to common stockholders for the period to be allocated between common and participating securities based upon their respective rights to receive dividends as if all income for the period had been distributed.

Basic net income (loss) per share attributable to common stockholders is computed by dividing the net income (loss) attributable to common stockholders by the weighted average number of shares of common stock outstanding for the period. Diluted net income (loss) attributable to common stockholders is computed by adjusting net income (loss) attributable to common stockholders to reallocate undistributed earnings based on the potential impact of dilutive securities. Diluted net income (loss) per share attributable to common stockholders is computed by dividing the diluted net income (loss) attributable to common stockholders by the weighted average number of shares of common stock outstanding for the period, including potential dilutive common shares assuming the dilutive effect of common stock equivalents.

Common A shares are excluded when computing net income (loss) per share as they have nominal economic rights.

The Company's convertible preferred stock contractually entitles the holders of such shares to participate in dividends but contractually do not require the holders of such shares to participate in losses of the Company. Accordingly, in periods in which the Company reports a net loss, such losses are not allocated to such participating securities. In periods in which the Company reports a net loss attributable to common stockholders, diluted net loss per share attributable to common stockholders is the same as basic net loss per share attributable to common stockholders, since dilutive common shares are not assumed to have been issued if their effect is anti-dilutive.

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

Recently adopted accounting pronouncements

In March 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-09, *Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting* ("ASU 2016-09"). ASU 2016-09 addresses several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, an option to recognize gross share compensation expense with actual forfeitures recognized as they occur, and classification on the consolidated statements of cash flows. Certain of these changes are required to be applied retrospectively, while other changes are required to be applied prospectively. The Company adopted ASU 2016-09 as of the required effective date of April 1, 2017 and elected prospectively to account for forfeitures as they occur rather than apply an estimated forfeiture rate to share-based compensation expense. The adoption of ASU 2016-09 did not have a material impact on the Company's financial position, results of operations or cash flows.

In November 2015, the FASB issued ASU No. 2015-17, *Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes* ("ASU 2015-17"). ASU 2015-17 requires deferred tax liabilities and assets to be classified as non-current in the consolidated balance sheet. The amendment may be applied either prospectively to all deferred tax liabilities and assets or retrospectively to all periods presented. The Company adopted ASU 2015-17 retrospectively to all periods presented as of March 31, 2017, and its adoption had no impact on the Company's financial position, results of operations or cash flows.

In November 2014, the FASB issued ASU No. 2014-16, *Determining Whether the Host Contract in a Hybrid Financial Instrument Issued in the Form of a Share Is More Akin to Debt or to Equity* ("ASU 2014-16"). The guidance requires an entity to determine the nature of the host contract by considering all stated and implied substantive terms and features of the hybrid financial instrument, weighing each term and feature on the basis of the relevant facts and circumstances (commonly referred to as the whole-instrument approach). The Company adopted ASU 2014-16 as of the required effective date of April 1, 2016 and reflected the adoption on a modified retrospective basis, and its adoption had no impact on the Company's financial position, results of operations or cash flows.

In August 2014, the FASB issued ASU No. 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern* (Subtopic 205-40) ("ASU 2014-15"). The amendments in this update explicitly require a company's management to assess an entity's ability to continue as a going concern and to provide related footnote disclosures in certain circumstances. The Company adopted ASU 2014-15 as of the required effective date of March 31, 2017. This guidance relates to footnote disclosure only, and its adoption had no impact on the Company's financial position, results of operations or cash flows.

Recently issued accounting pronouncements

In July 2017, the FASB issued ASU No. 2017-11, *Earnings Per Share (Topic 260), Distinguishing Liabilities from Equity (Topic 480), Derivatives and Hedging (Topic 815) I. Accounting for Certain Financial Instruments with Down Round Features II. Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interests with a Scope Exception* ("ASU 2017-11"). Part I applies to entities that issue financial instruments such as warrants, convertible debt or convertible preferred stock that contain

Replimune Group, Inc.

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down-round features. Part II replaces the indefinite deferral for certain mandatorily redeemable noncontrolling interests and mandatorily redeemable financial instruments of nonpublic entities contained within Accounting Standards Codification ("ASC") Topic 480 with a scope exception and does not impact the accounting for these mandatorily redeemable instruments. ASU 2017-11 is required to be adopted for annual periods beginning after December 15, 2018, including interim periods within those fiscal years. The Company is currently evaluating the impact that the adoption of ASU 2017-11 will have on its consolidated financial statements.

In May 2017, the FASB issued ASU No. 2017-09, *Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting* ("ASU 2017-09"), which clarifies when to account for a change to the terms or conditions of a share-based payment award as a modification. Under the new guidance, modification accounting is required only if the fair value, the vesting conditions, or the classification of the award (as equity or liability) changes as a result of the change in terms or conditions. The standard is effective for annual periods beginning after December 15, 2017, including interim periods within those fiscal years. Early adoption is permitted. The Company will apply ASU 2017-09 to any changes to the terms or conditions of share-based payment awards after the adoption date.

In November 2016, the FASB issued ASU No. 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash* ("ASU 2016-18"), which requires restricted cash to be presented with cash and cash equivalents on the consolidated statements of cash flows and disclosure of how the consolidated statements of cash flows reconciles to the balance sheet if restricted cash is shown separately from cash and cash equivalents on the balance sheet. The standard is effective for annual periods beginning after December 15, 2017, including interim periods within those fiscal years. Early adoption is permitted. Upon adoption on April 1, 2018, the amount of cash and cash equivalents previously presented on the consolidated statements of cash flows for the years ended March 31, 2017 and 2018 will increase by $75 and $78, respectively, to reflect the inclusion of restricted cash. Additionally, transfers between restricted and unrestricted cash will no longer be presented as a component of the Company's investing activities.

In October 2016, the FASB issued ASU No. 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfer of Assets Other than Inventory* ("ASU 2016-16"), which requires the recognition of the income tax consequences of an intra-entity transfer of an asset, other than inventory, when the transfer occurs. The standard is effective for annual periods beginning after December 15, 2017, including interim periods within those fiscal years. The Company is currently evaluating the impact that the adoption of ASU 2016-16 will have on its consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments* ("ASU 2016-15"), to address diversity in practice in how certain cash receipts and cash payments are presented and classified in the consolidated statements of cash flows. The standard is effective for annual periods beginning after December 15, 2017, including interim periods within those fiscal years. The Company is currently evaluating the impact that the adoption of ASU 2016-15 will have on its consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02*, Leases (Topic 842)* ("ASU 2016-02"), which sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a

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Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

contract (i.e., lessees and lessors). The new standard requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will determine whether lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease, respectively. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. Leases with a term of 12 months or less will be accounted for similar to existing guidance for operating leases today. ASU 2016-02 supersedes the previous leases standard, ASC 840, Leases. The standard is effective for public entities for annual periods beginning after December 15, 2018 including interim periods within those fiscal years. Early adoption is permitted. The Company is currently evaluating the impact that the adoption of ASU 2016-02 will have on its consolidated financial statements.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) ("ASU 2014-09"), which supersedes existing revenue recognition guidance under GAAP. The standard's core principle is that a company will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. The standard defines a five-step process to achieve this principle, and will require companies to use more judgment and make more estimates than under the current guidance. The Company expects that these judgments and estimates will include identifying performance obligations in the customer contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. ASU 2014-09 also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts. In August 2015, the FASB issued ASU No. 2015-14, *Revenue from Contracts with Customers* (Topic 606): Deferral of the Effective Date, which delays the effective date of ASU 2014-09 such that the standard is effective for public entities for annual periods beginning after December 15, 2017 and for interim periods within those fiscal years. Early adoption of the standard is permitted for annual periods beginning after December 15, 2016. The adoption of ASU 2014-09 is not expected to have an impact on the Company's consolidated financial statements as the Company does not currently have any revenue-generating arrangements.

3. Fair value of financial assets and liabilities

The following tables present information about the Company's financial assets and liabilities measured at fair value on a recurring basis:

	Fair value measurements as of March 31, 2017 using:			
	Level 1	Level 2	Level 3	Total
Liabilities:				
Warrant liability	$ —	$ —	$ 670	$ 670
	$ —	$ —	$ 670	$ 670

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Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

	Fair value measurements as of March 31, 2018 using:			
	Level 1	Level 2	Level 3	Total
Assets:				
Money market funds	$ —	$ 4,130	$ —	$ 4,130
Commercial paper	—	27,998	—	$ 27,998
Corporate debt securities	—	15,970	—	15,970
	$ —	$ 48,098	$ —	$ 48,098
Liabilities:				
Warrant liability	$ —	$ —	$ 1,642	$ 1,642
	$ —	$ —	$ 1,642	$ 1,642

During the years ended March 31, 2017 and 2018, there were no transfers between levels.

Valuation of cash equivalents and short-term investments

Money market funds, commercial paper and corporate debt securities were valued by the Company using quoted prices in active markets for similar securities, which represent a Level 2 measurement within the fair value hierarchy.

Valuation of warrant liability

The warrant liability is related to the warrants to purchase shares of series seed preferred stock (see Note 8). The fair value of the warrant liability was determined based on significant inputs not observable in the market, which represents a Level 3 measurement within the fair value hierarchy.

The Company used the Black-Scholes option-pricing model, which incorporates assumptions and estimates, to value the warrant liability. Key estimates and assumptions impacting the fair value measurement include (i) the expected term of the warrants, (ii) the risk-free interest rate, (iii) the expected dividend yield and (iv) expected volatility of the price of the underlying series seed preferred stock. The Company estimated the fair value per share of the underlying series seed preferred stock based, in part, on the results of third-party valuations and additional factors deemed relevant. The risk-free interest rate was determined by reference to the U.S. Treasury yield curve for time periods approximately equal to the remaining contractual term of the warrants. The Company estimated a 0% expected dividend yield based on the fact that the Company has never paid or declared dividends and does not intend to do so in the foreseeable future. As the Company is a private company and lacks company-specific historical and implied volatility information of its stock, the expected stock volatility was based on the historical volatility of publicly traded peer companies for a term equal to the remaining expected term of the warrants.

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Notes to consolidated financial statements (Continued)

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The following table presents the unobservable inputs of the warrant liability:

	Year ended March 31,	
	2017	2018
Risk-free interest rate	1.33%	2.69%
Expected dividend yield	0%	0%
Expected term (in years)	8.5	7.5
Expected volatility	75.0%	65.8%

The following table presents a roll forward of the warrant liability:

	Warrant liability
Balance at March 31, 2016	$ 520
Change in fair value	150
Balance at March 31, 2017	670
Change in fair value	972
Balance at March 31, 2018	$ 1,642

4. Short-term investments

Short-term investments by investment type consisted of the following as of March 31, 2018:

	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Commercial paper	$ 28,028	$ 2	$ (32)	$ 27,998
Corporate debt securities	16,005		(35)	15,970
	$ 44,033	$ 2	$ (67)	$ 43,968

The Company did not have any short-term investments as of March 31, 2017.

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Notes to consolidated financial statements (Continued)

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5. Property, plant and equipment, net

Property, plant and equipment, net consisted of the following:

	March 31,	
	2017	2018
Leasehold improvements	$ 154	$ 154
Office equipment	49	49
Computer equipment	67	87
Plant and laboratory equipment	219	336
	489	626
Less: Accumulated depreciation and amortization	(147)	(256)
	$ 342	$ 370

Depreciation and amortization expense was $122 and $109 for the years ended March 31, 2017 and 2018, respectively.

6. Accrued expenses and other current liabilities

Accrued expenses and other current liabilities consisted of the following:

	March 31,	
	2017	2018
Accrued research and development costs	$ 649	$ 949
Accrued compensation and benefits costs	514	949
Accrued professional fees	440	1,094
Deferred rent	23	26
Other	36	153
	$ 1,662	$ 3,171

7. Convertible preferred stock

As of March 31, 2017, the Company's certificate of incorporation, as then in effect, authorized the Company to issue 1,114,553 shares of par value $0.001 per share convertible preferred stock. As of March 31, 2018, the Company's certificate of incorporation, as amended and restated, authorized the Company to issue 1,975,968 shares of par value $0.001 per share convertible preferred stock.

The Company has issued series seed convertible preferred stock (the "series seed preferred stock"), series A convertible preferred stock (the "series A preferred stock") and series B convertible preferred stock (the "series B preferred stock"). The series seed preferred stock, series A preferred stock and series B preferred stock are collectively referred to as the "preferred stock."

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(Amounts in thousands, except share and per share amounts)

In May 2015, the Company issued and sold 200,000 shares of series seed preferred stock at a price of $10.00 per share for cash proceeds of $2,000. In connection with the series seed preferred stock issuance, the Company issued 50,000 warrants to purchase shares of series seed preferred stock (See Note 8).

In September 2015, the Company entered into a subscription agreement (the "Subscription Agreement") for the sale of series A preferred stock in two investment closings of (i) first tranche shares of series A preferred stock and (ii) second tranche shares of series A preferred stock. In September 2015, the Company issued and sold 432,276 first tranche shares of series A preferred stock at a price of $34.70 per share for cash proceeds of $15,000. Under the Subscription Agreement, the issuance and sale of second tranche shares of series A preferred stock was subject to a Milestone, defined as the filing of an Investigational New Drug application by the Company (or a subsidiary thereof) with the U.S. Food and Drug Administration in respect of the Company's first clinical trial becoming effective. In March 2017, Replimune UK's board of directors, including the required number of investor directors, waived the Milestone required by the Subscription Agreement and the Company issued and sold 432,277 second tranche shares of series A preferred stock at a price of $34.70 per share for cash proceeds of $15,000. The Company determined that the future tranche obligation of the Subscription Agreement did not meet the definition of a freestanding financial instrument because, while separately exercisable, it was not legally detachable. Further, the Company determined that, while embedded, the future tranche obligation of the Subscription Agreement did not require bifurcation for accounting purposes as it was clearly and closely related to the economic characteristics and risks of the series A preferred stock and would not meet the definition of a derivative on a standalone basis.

In July 2017, the Company issued and sold 861,415 shares of series B preferred stock at a price of $63.79 per share for cash proceeds of $54,950, net of issuance costs of $198.

As of each balance sheet date, preferred stock consisted of the following:

	March 31, 2017				
	Preferred shares authorized	Preferred shares issued and outstanding	Carrying value	Liquidation preference	Common stock issuable upon conversion
Series seed preferred stock	250,000	200,000	$ 1,609	$ 2,000	1,989,376
Series A preferred stock	864,553	864,553	30,000	30,000	8,599,601
	1,114,553	1,064,553	$ 31,609	$ 32,000	10,588,977

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Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

	March 31, 2018				
	Preferred shares authorized	Preferred shares issued and outstanding	Carrying value	Liquidation preference	Common stock issuable upon conversion
Series seed preferred stock	250,000	200,000	$ 1,609	$ 2,000	1,989,376
Series A preferred stock	864,553	864,553	30,000	30,000	8,599,601
Series B preferred stock	861,415	861,415	54,752	54,950	8,586,383
	1,975,968	1,925,968	$ 86,361	$ 86,950	19,157,360

The holders of the preferred stock have the following rights and preferences:

Voting

The holders of the preferred stock are entitled to vote, together with the holders of common stock, on all matters submitted to the stockholders for a vote and are entitled to the number of votes equal to the number of whole shares of common stock into which such holders of preferred stock could convert on the record date of for determination of stockholders entitled to vote. The holders of preferred stock and common stock, voting as a single class, are entitled to elect two directors of the Company. Additionally, the holders of the series seed preferred stock are entitled to elect two directors of the Company, the holders of the series A preferred stock are entitled to elect one director of the Company and the holders of at least 55% of the outstanding series B preferred stock are entitled to elect two directors of the Company.

Conversion

Each share of preferred stock is convertible into common stock, at any time, at the option of the holder, and without the payment of additional consideration, at the applicable conversion ratio then in effect for each series of preferred stock and subject to adjustment in accordance with anti-dilution provisions. In addition, each share of preferred stock will be converted into common stock at the applicable conversion ratio then in effect for each series of preferred stock upon the earlier of (i) the closing of a firm commitment underwritten public offering of the Company's common stock with gross proceeds to the Company of at least $30,000 and at a price per share of not less than $9.62, subject to appropriate adjustment in the event of any stock split, stock dividend, combination or other similar recapitalization, or (ii) a date specified by vote or written consent of the holders of 75% of the outstanding preferred stock (voting together as a single class on an as-converted basis). For any events of deemed liquidation (as defined below) in which series B preferred stock investors would receive less than their full liquidation preference, a further approval of holders of 55% of the outstanding series B preferred stock is required. As of March 31, 2017 and 2018, each share of preferred stock was convertible into one share of common stock.

The conversion ratio for each series of preferred stock is determined by dividing the original issue price of each series of preferred stock by the conversion price of each series (as defined below). As of March 31, 2017 and 2018, the series seed preferred stock original issue price and series seed preferred stock

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Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

conversion price were $10.00 per share and $1.01 per share, respectively. As of March 31, 2017 and 2018, the series A preferred stock original issue price and Series A preferred stock conversion price were $34.70 per share and $3.49 per share, respectively. As of March 31, 2017 and 2018, the series B preferred stock original issue price and series B preferred stock conversion price were $63.79 per share and $6.41 per share, respectively. Such series seed preferred stock original issue price, series A preferred stock original issue price and series B preferred stock original issue price and series seed preferred stock conversion price, series A preferred stock conversion price and series B preferred stock conversion price, and the rate at which each series of preferred stock may be converted into common stock, are subject to appropriate adjustment from time to time in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the preferred stock. The series seed preferred stock conversion price, series A preferred stock conversion price and series B preferred stock conversion price are also subject to adjustments based on weighted-average anti-dilution provisions set forth in the Company's certificate of incorporation, as amended and restated, in the event that additional securities are issued at a purchase price less than the series seed preferred stock conversion price, series A preferred stock conversion price or series B preferred stock conversion price then in effect.

Dividends

The holders of the preferred stock are entitled to be paid noncumulative dividends if and when declared by the Company's board of directors. The Company may not pay any dividends on shares of common stock of the Company unless the holders of preferred stock then outstanding simultaneously receive dividends at the same rate and same time as dividends paid with respect to common stock. Dividends shall accrue on a daily basis assuming a 365-day year, and shall be paid in cash. Through March 31, 2017 and 2018, no dividends have been declared or paid.

Liquidation preference

In the event of any voluntary or involuntary liquidation event, dissolution, winding up of the Company or an event of deemed liquidation, each holder of the then outstanding series B preferred stock will be entitled to receive, prior and in preference to any distributions to the holders of series A preferred stock, series seed preferred stock and common stock, an amount equal to the greater of (i) the applicable original issue price, plus any declared but unpaid dividends thereon, or (ii) the amount such holder would have received if such holder had converted its shares into common stock immediately prior to such liquidation event.

After the payment of all preferential amounts to the holders of series B preferred stock, each holder of the then outstanding series A preferred stock will be entitled to receive, prior and in preference to any distributions to the holders of series seed preferred stock and common stock, an amount equal to the greater of (i) the applicable original issue price, plus any declared but unpaid dividends thereon, or (ii) the amount such holder would have received if such holder had converted its shares into common stock immediately prior to such liquidation event.

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After the payment of all preferential amounts to the holders of series A preferred stock, each holder of the then outstanding series seed preferred stock will be entitled to receive, prior and in preference to any distributions to the holders of common stock, an amount equal to the greater of (i) the applicable original issue price, plus any declared but unpaid dividends thereon or (ii) the amount such holder would have received if such holder had converted its shares into common stock immediately prior to such liquidation event.

After payments have been made in full to the holders of preferred stock, then, to the extent available, the remaining amounts will be distributed among the holders of the shares of common stock, the holders of series B preferred stock and the holders of series A preferred stock, pro rata based on the number of shares held by each holder, assuming full conversion of all such preferred stock.

The holders of series B preferred stock and series A preferred stock are subject to a participation cap (as defined below) for remaining amounts that will be distributed, which is $127.58 per share for the series B preferred stock and $69.40 per share for the series A preferred stock.

To the extent available, the remaining amounts greater than the total of the participation caps will be distributed among the holders of the shares of common stock, pro rata based on the number of shares held by each holder.

Unless a majority of the holders of the then outstanding preferred stock, on an as-if-converted basis voting together as a single class, elect otherwise, an event of deemed liquidation shall include a merger or consolidation (other than one in which stockholders of the Company own a majority by voting power of the outstanding shares of the surviving or acquiring corporation), sale, transfer or exclusive license of substantially all of the assets of the Company. The preferred stock is conditionally redeemable upon an event of deemed liquidation, which is defined as any (i) merger, consolidation or acquisition, involving the Company or its Subsidiary Undertaking, in which the Company or its subsidiary undertaking is not the surviving entity, (ii) an asset sale, (iii) a share sale, (iv) an initial public offering, (v) the occurrence of a change of control in respect of the Company, (vi) a winding up (vii) or any other a return of capital to stockholders (other than a conversion, redemption or repurchase of shares made in accordance with the applicable governing documents).

Redemption

The Company's certificate of incorporation, as amended and restated, does not provide redemption rights to the holders of preferred stock.

The holders of shares of convertible preferred stock have liquidation rights in the event of a deemed liquidation that, in certain situations, are not solely within the control of the Company. Therefore, convertible preferred stock is classified outside of stockholders' deficit.

Upon issuance of each class of preferred stock, the Company assessed the embedded conversion and liquidation features of the securities. The Company determined that each class of preferred stock did not require the Company to separately account for the liquidation features. The Company also concluded that no beneficial conversion feature existed upon the issuance date of the series A preferred stock or series B

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preferred stock as of March 31, 2017 or 2018. However, the Company did conclude that a beneficial conversion feature existed upon the issuance date of the series seed preferred stock. As the series seed preferred stock is convertible into common stock, at any time, at the option of the holder, and without the payment of additional consideration, at the applicable conversion ratio then in effect, the Company recognized the accretion of the beneficial conversion feature as a deemed dividend immediately upon the issuance of the series seed preferred stock.

8. Preferred stock warrants

In connection with the issuance of the series seed preferred stock, the Company issued to the holders of the series seed preferred stock warrants for the purchase of 50,000 shares of series seed preferred stock, which became fully vested and exercisable in the year of issuance. The warrants to purchase shares of series seed preferred stock were issued at an exercise price of $10.00 per share and expire on the earlier of September 16, 2025 or a qualified change of control event.

The issuance date fair value of the warrants to purchase shares of series seed preferred stock was $391 and was recorded as a liability with a corresponding reduction in the carrying value of the series seed preferred stock. As of March 31, 2017 and 2018, the fair value of the warrant liability was $670 and $1,642, respectively. The Company recognized a loss of $150 and $972 within other income (expense), net in the consolidated statements of operations for the years ended March 31, 2017 and 2018, respectively, related to the change in fair value of the warrant liability.

9. Common stock

As of March 31, 2017 and 2018, the Company was authorized to issue 27,314,288 shares and 27,314,288 shares, respectively, of par value $0.001 per share common stock (including 26,258 authorized shares of common A stock). In July 2017, the Company issued and sold 26,258 shares of par value $0.001 per share common A stock for nominal cash proceeds. The voting, dividend and liquidation rights of the holders of the Company's common stock is subject to and qualified by the rights, powers and preferences of the holders of the preferred stock as set forth above.

As of March 31, 2017 and 2018, the Company had reserved 13,746,206 shares and 22,306,801 shares, respectively, of common stock for the conversion of outstanding shares of preferred stock (see Note 7), the exercise of outstanding stock options, the number of shares remaining available for grant under the Company's 2017 Equity Compensation Plan (see Note 10) and the exercise of the outstanding warrants to purchase shares of series seed preferred stock (see Note 8), assuming all warrants to purchase shares of series seed preferred stock became warrants to purchase shares of common stock at the applicable conversion ratio.

Voting

Each share of common stock, including common A stock, entitles the holder to one vote, together with the holders of preferred stock, on all matters submitted to the stockholders for a vote. The holders of common

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stock, together with the holders of preferred stock and voting as a single class, are entitled to elect two directors of the Company by vote of a majority of such shares.

Dividends

Common stockholders are entitled to receive dividends, as may be declared by the Company's board of directors, if any, subject to the preferential dividend rights of the preferred stock. Through March 31, 2017 and 2018, no cash dividends have been declared or paid.

Each share of common A stock is entitled to receive dividends, as may be declared by the Company's board of directors, if any, equal to a maximum of 100% of each share's par value. Upon an event of deemed liquidation, common A stock is entitled to receive dividends equal to a maximum of 300% of each share's par value.

10. Stock-based compensation

2015 Enterprise Management Incentive Share Option Plan

The 2015 Enterprise Management Incentive Share Option Plan of Replimune UK (the "2015 Plan") provided for Replimune UK to grant incentive stock options, non-statutory stock options, stock awards, stock units, stock appreciation rights and other stock-based awards. Incentive stock options are granted only to the Company's employees, including officers and directors who are also employees. Non-statutory stock options are granted to employees, members of the board of directors, outside advisors and consultants of the Company.

The maximum number of common shares that could be issued under the 2015 Plan was 2,659,885 as of March 31, 2017, of which 1,729,858 remained available for future grants as of March 31, 2017.

2017 Equity Compensation Plan

In July 2017, in conjunction with the Reorganization, the 2015 Plan was terminated and all awards were cancelled with replacement awards issued under the 2017 Equity Compensation Plan (the "2017 Plan"). Subsequent to the Reorganization, no additional grants will be made under the 2015 Plan and any outstanding awards under the 2015 Plan will continue with their original terms. The Company concluded that the cancellation of the 2015 Plan and issuance of replacement awards under the 2017 Plan was a modification with no change in the material rights and preferences and therefore no recorded change in the fair value of each respective award.

The Company's 2017 Plan provides for the Company to grant incentive stock options or non-statutory stock options, stock awards, stock units, stock appreciation rights and other stock-based awards. Incentive stock options may be granted only to the Company's employees, including officers and directors who are also employees. Restricted stock awards and non-statutory stock options may be granted to employees, officers, members of the board of directors, advisors and consultants of the Company. The maximum number of common shares that may be issued under the 2017 Plan was 2,659,885 as of March 31, 2018, of which 131,850 remained available for future grants as of March 31, 2018. Shares with respect to which awards have expired, terminated, surrendered or cancelled under the 2017 Plan without having been fully

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exercised will be available for future awards under the 2017 Plan. In addition, shares of common stock that are tendered to the Company by a participant to exercise an award are added to the number of shares of common stock available for the grant of awards.

The 2017 Plan is and the 2015 Plan was administered by the board of directors or, at the discretion of the board of directors, by a committee of the board of directors. However, the board of directors shall administer and approve all grants made to non-employee directors. The exercise prices, vesting and other restrictions are determined at the discretion of the board of directors, except that the exercise price per share of incentive stock options may not be less than 100% of the fair market value of the common stock on the date of grant (or 110% of fair value in the case of an award granted to employees who hold more than 10% of the total combined voting power of all classes of stock at the time of grant) and the term of stock options may not be greater than five years for an incentive stock option granted to a 10% stockholder and greater than ten years for all other options granted. Stock options awarded under both plans expire ten years after the grant date, unless the board of directors sets a shorter term. Vesting periods for both plans are determined at the discretion of the board of directors. Incentive stock options granted to employees and non-statutory options granted to employees, officers, members of the board of directors, advisors, and consultants of the Company typically vest over four years.

Stock option valuation

The fair value of stock option grants is estimated using the Black-Scholes option-pricing model. The Company historically has been a private company and lacks company-specific historical and implied volatility information. Therefore, it estimates its expected stock volatility based on the historical volatility of a publicly traded set of peer companies and expects to continue to do so until such time as it has adequate historical data regarding the volatility of its own traded stock price. For options with service-based vesting conditions, the expected term of the Company's stock options has been determined utilizing the "simplified" method for awards that qualify as "plain-vanilla" options. The expected term of stock options granted to non-employees is equal to the contractual term of the option award. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. Expected dividend yield is based on the fact that the Company has never paid cash dividends and does not expect to pay any cash dividends in the foreseeable future.

The following table presents, on a weighted-average basis, the assumptions that the Company used to determine the grant-date fair value of stock options granted to employees and directors:

	Year ended March 31,	
	2017	**2018**
Risk-free interest rate	1.67%	2.01%
Expected term (in years)	6.0	6.0
Expected volatility	75.0%	75.0%
Expected dividend yield	0%	0%

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

The following table presents the assumptions that the Company used to determine the grant-date fair value of stock options granted to a non-employee:

	Year ended March 31, 2018
Risk-free interest rate	2.29%
Expected term (in years)	10.0
Expected volatility	75.0%
Expected dividend yield	0%

The Company did not grant stock options to non-employees during the year ended March 31, 2017.

Stock options

The following table summarizes the Company's stock option activity since March 31, 2017:

	Number of shares	Weighted average exercise price	Weighted average contractual term (years)	Aggregate intrinsic value
Outstanding as of March 31, 2017	930,027	$ 1.63	9.08	$ 93
Granted	1,598,008	3.35	9.39	
Exercised	(7,788)	3.30		
Outstanding as of March 31, 2018	2,520,247	$ 2.72	8.91	$ 2,808
Options exercisable as of March 31, 2018	592,412	$ 1.84	8.22	$ 1,184
Options vested and expected to vest as of March 31, 2018	2,520,247	$ 2.72	8.91	$ 2,808

The aggregate intrinsic value of stock options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's common stock for those stock options that had exercise prices lower than the fair value of the Company's common stock.

The weighted average grant-date fair value per share of stock options granted during the years ended March 31, 2017 and 2018 was $0.82 and $1.92, respectively.

The total fair value of options vested during the years ended March 31, 2017 and 2018 was $168 and $398, respectively.

As of March 31, 2017 and 2018 there were no outstanding unvested service-based stock options held by non-employees.

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

Stock-based compensation

Stock-based compensation expense was classified in the consolidated statements of operations as follows:

	Year ended March 31,	
	2017	2018
Research and development	$ 65	$ 335
General and administrative	143	477
Total share based compensation expense	$ 208	$ 812

As of March 31, 2018, total unrecognized compensation cost related to the unvested stock-based awards was $2,765, which is expected to be recognized over a weighted average period of 2.66 years.

11. Income taxes

2017 U.S. tax reform

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Tax Reform Act"), which significantly reforms the Internal Revenue Code of 1986, as amended (the "Code"). The Tax Reform Act, among other things, contains significant changes to corporate taxation, including reduction of the corporate tax rate from the existing top marginal rate of 35% to a flat rate of 21%, effective as of January 1, 2018; limitation of the deduction for net operating losses to 80% of annual taxable income and elimination of net operating loss carrybacks, in each case, for losses arising in taxable years beginning after December 31, 2017 (though any such tax losses may be carried forward indefinitely); and modifying or repealing many business deductions and credits.

The staff of the Securities and Exchange Commission issued Staff Accounting Bulletin No. 118 ("SAB 118") to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Tax Reform Act. In connection with the initial analysis of the impact of the Tax Reform Act, the Company remeasured certain deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future, which is generally 21%. The remeasurement of the Company's deferred tax assets and liabilities was offset by a corresponding change in the Company's valuation allowance.

The Company is still in the process of analyzing the impact of the Tax Reform Act. Where the Company has been able to make reasonable estimates of the effects for which its analysis is not yet complete, the Company has recorded provisional amounts. The ultimate impact to the Company's consolidated financial statements of the Tax Reform Act may differ from the provisional amounts due to, among other things, additional analysis, changes in interpretations and assumptions the Company has made, additional regulatory guidance that may be issued, and actions the Company may take as a result of the Tax Reform Act. The accounting is expected to be complete when the Company's 2017 U.S. corporate income tax return is filed in 2018.

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

Income taxes

During the years ended March 31, 2017 and 2018, the Company recorded no income tax benefits for the net operating losses incurred and capitalized start-up costs generated during the years then ended, due to its uncertainty of realizing a benefit from those items. The Company's net loss before income taxes were generated in the United States and the United Kingdom.

Net loss before income taxes for the years ended March 31, 2017 and 2018 were as follows:

	Year Ended March 31,	
	2017	2018
United States	$ (3,450)	$ (8,992)
Foreign (United Kingdom)	(4,254)	(10,710)
	$ (7,704)	$ (19,702)

A reconciliation of the U.S. federal statutory income tax rate to the Company's effective income tax rate for the years ended March 31, 2017 and 2018 is as follows:

	March 31,	
	2017	2018
U.S. Federal statutory income tax rate	(34.00)%	(21.00)%
State taxes, net of federal benefit	(2.4)	(2.6)
Research and development expenses	7.1	3.8
Remeasurement of deferred taxes as a result of tax reform	—	2.6
Foreign tax rate differential	8.8	2.2
Change in valuation allowance	19.2	14.0
Other	1.3	1.0
Effective income tax rate	0.00%	0.00%

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

Components of the Company's deferred tax assets as of March 31, 2017 and 2018 were as follows:

	March 31,	
	2017	2018
Deferred tax assets:		
Foreign net operating loss carryforwards	$ 247	1,405
State net operating loss carryforwards	—	15
Capitalized start-up costs	1,661	3,340
Other	1	1
Total deferred tax assets	1,909	4,761
Deferred tax liabilities:		
Property, plant and equipment	(22)	(37)
Total deferred tax liabilities	(22)	(37)
Valuation allowance	(1,887)	(4,724)
Net deferred tax assets	$ —	$ —

As of March 31, 2017 and 2018, the Company had foreign net operating loss carryforwards of approximately $1,451 and $8,265 respectively, which can be carried forward indefinitely. As of March 31, 2018, the Company had state net operating loss carryforwards of $235 which will expire in 2038.

Changes in the valuation allowance for deferred tax assets during the years ended March 31, 2017 and 2018 related primarily to the increase in net operating loss carryforwards and capitalized start-up costs in 2018, and were as follows:

	March 31,	
	2017	2018
Valuation allowance as of beginning of year	$ 416	1,887
Increases recorded to income tax provision	1,471	3,347
Remeasurement of deferred taxes as a result of tax reform	—	(510)
Valuation allowance as of end of year	$ 1,887	$ 4,724

As of March 31, 2017 and 2018, the Company had not recorded any amounts for unrecognized tax benefits. The Company's policy is to record interest and penalties related to income taxes as part of its income tax provision. As of March 31, 2017 and 2018, the Company had no accrued interest or penalties related to uncertain tax positions and no amounts had been recognized in the Company's consolidated statements of operations and comprehensive loss.

The Company files income tax returns in the United States, Massachusetts and the United Kingdom as prescribed by the tax laws of the jurisdictions in which it operates. In the normal course of business, the Company is subject to examination by U.S. federal, state and foreign jurisdictions, where applicable. There

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

are currently no pending tax examinations. The Company is open to future tax examination in the U.S. under statute from 2016 to the present and in the United Kingdom from 2015 to the present.

12. Net loss per share and unaudited pro forma net loss per share

Net loss per share

Basic and diluted net loss per share attributable to common stockholders was calculated as follows:

	Year ended March 31,	
	2017	2018
Numerator:		
Net loss attributable to common stockholders	$ (7,704)	$ (19,702)
Denominator:		
Weighted average common shares outstanding, basic and diluted	4,973,439	4,978,539
Net loss per share attributable to common stockholders, basic and diluted	$ (1.55)	$ (3.96)

The Company's potentially dilutive securities, which include stock options, preferred stock and warrants to purchase shares of series seed preferred stock, have been excluded from the computation of diluted net loss per share as the effect would be to reduce the net loss per share. Common A stock has been excluded from the computation of diluted net loss per share because the shares have nominal economic participation rights. Therefore, the weighted average number of common shares outstanding used to calculate both basic and diluted net loss per share attributable to common stockholders is the same. The Company excluded the following potential common shares, presented based on amounts outstanding at each period end, from the computation of diluted net loss per share attributable to common stockholders for the periods indicated because including them would have had an anti-dilutive effect:

	Year ended March 31,	
	2017	2018
Options to purchase common stock	930,027	2,520,247
Convertible preferred stock (as converted to common stock)	10,588,977	19,157,360
Warrants to purchase shares of series seed preferred stock (as converted to common stock)	497,344	497,344
	12,016,348	22,174,951

Unaudited pro forma net loss per share attributable to common stockholders

The unaudited pro forma basic and diluted net loss per share attributable to common stockholders for the year ended March 31, 2018 has been prepared to give effect to adjustments arising upon the completion of the proposed IPO. The unaudited pro forma net loss attributable to common stockholders used in the calculation of unaudited pro forma basic and diluted net loss per share attributable to common stockholders does not include the effects of the warrant liability because the calculation gives effect, upon

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

the proposed IPO, to (i) the conversion of shares of preferred stock into shares of common stock and (ii) the warrants to purchase shares of series seed preferred stock becoming warrants to purchase shares of common stock as if the proposed IPO had occurred on the later of April 1, 2017 or the issuance date of the preferred stock and the warrants to purchase shares of series seed preferred stock.

Unaudited pro forma basic and diluted net loss per share attributable to common stockholders was calculated as follows:

	Year ended March 31, 2018
Numerator:	
Net loss attributable to common stockholders	$ (19,702)
Change in fair value of warrant liability	972
Pro forma net loss attributable to common stockholders	$ (18,730)
Denominator:	
Weighted average common shares outstanding, basic and diluted	4,978,539
Pro forma adjustment to reflect assumed conversion of preferred stock to common stock upon the completion of the proposed initial public offering	16,528,159
Pro forma weighted average common shares outstanding, basic and diluted	21,506,697
Pro forma net loss per share attributable to common stockholders, basic and diluted	$ (0.87)

13. Commitments and contingencies

Lease agreements

In December 2015, the Company entered into a lease agreement for office space in Woburn, Massachusetts, which expires on March 30, 2021. The Company has the option to extend the lease agreement for successive periods of five years. Monthly lease payments, inclusive of base rent and ancillary charges, total $7. Monthly base rent is subject to increase each year in proportion to the Consumer Price Index.

In April 2016, the Company entered into a lease agreement for office and laboratory space in Abingdon, England, which expires on April 3, 2026. The Company has the right to terminate the lease as of April 4, 2021 upon at least nine months' prior written notice. Monthly lease payments are inclusive of base rent, ancillary charges, non-rent shared tenant occupancy costs and the respective value added tax to be paid. Monthly lease payments include base rent of approximately $23 through December 3, 2016 and $31 thereafter. Monthly base rent is subject to increase after April 2021 in proportion to the Retail Price Index.

In April 2016, the Company subleased a portion of the leased premises for monthly base rent of approximately $23. The Company recognized $205 and $0 under the sublease as a reduction to rent expense recorded within research and development expenses in the consolidated statements of operations during the years ended March 31, 2017 and 2018, respectively.

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

The Company recorded rent expense of $282 and $430 during the years ended March 31, 2017 and 2018, respectively.

The following table summarizes the future minimum lease payments due under the Company's operating leases as of March 31, 2018:

2019	$	431
2020		431
2021		431
	$	1,293

Manufacturing commitments

The Company has entered into an agreement with a contract manufacturing organization to provide clinical trial products. As of March 31, 2017 and 2018, the Company had committed to minimum payments under these arrangements totaling $2,004 and $2,938, respectively, through March 31, 2019.

Indemnification agreements

In the ordinary course of business, the Company may provide indemnification of varying scope and terms to vendors, lessors, business partners and other parties with respect to certain matters including, but not limited to, losses arising out of breach of such agreements or from intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with members of its board of directors that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnifications. The Company is not aware of any claims under indemnification arrangements, and therefore it has not accrued any liabilities related to such obligations in its consolidated financial statements as of March 31, 2017 or 2018.

Legal proceedings

The Company is not a party to any litigation and does not have contingency reserves established for any litigation liabilities.

Agreement with Bristol-Myers Squibb Company

In February 2018, the Company entered into an agreement with Bristol-Myers Squibb Company ("BMS"). Pursuant to the agreement, BMS will provide to the Company, at no cost, a compound for use in the Company's ongoing clinical trial. Under the agreement, the Company will sponsor, fund and conduct the clinical trial in accordance with an agreed-upon protocol. BMS granted the Company a non-exclusive, non-transferrable, royalty-free license (with a right to sublicense) under its intellectual property to its compound in the clinical trial and agreed to manufacture and supply its compound, at its cost and for no charge to the Company, for use in the clinical trial. Both parties will own and study data produced in the

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

clinical trial, other than study data related solely to BMS's compound, which will belong solely to BMS, or study data related solely to the Company's compound, which will belong solely to the Company.

Unless earlier terminated, the agreement will remain in effect until (i) the completion of the clinical trial, (ii) all related clinical trial data have been delivered to both parties and (iii) the completion of any statistical analyses and bioanalyses contemplated by the clinical trial protocol or any analysis otherwise agreed upon by the parties. The agreement may be terminated by either party (i) in the event of an uncured material breach by the other party, (ii) in the event the other party is insolvent or in bankruptcy proceedings or (iii) for safety reasons. Upon termination, the licenses granted to the Company to use BMS's compound in the clinical trial will terminate.

14. Benefit plans

The Company established a defined-contribution savings plan under Section 401(k) of the Code (the "401(k) Plan"). The 401(k) Plan covers substantially all employees who meet minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pre-tax basis. Matching contributions to the 401(k) Plan may be made at the discretion of the Company's board of directors. During the years ended March 31, 2017 and 2018, the Company made contributions totaling $8 and $49, respectively, to the 401(k) Plan.

We provide a pension contribution plan for our employees in the United Kingdom, pursuant to which we match our employees' contributions each year in amounts up to 8% of their annual base salary.

15. Geographic information

The Company operates in two geographic regions: the United States (Massachusetts) and the United Kingdom (Oxfordshire). Information about the Company's long-lived assets held in different geographic regions is presented in the tables below:

	March 31,	
	2017	**2018**
United States	$ 30	$ 20
United Kingdom	312	350
	$ 342	$ 370

16. Subsequent events

For its consolidated financial statements as of March 31, 2018 and for the year then ended, the Company evaluated subsequent events through June 11, 2018, the date on which those financial statements were issued.

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

Agreement with Regeneron Pharmaceuticals, Inc.

In May 2018, the Company entered into an agreement with Regeneron Pharmaceuticals, Inc., ("Regeneron"). The Company and Regeneron are each independently developing compounds for the treatment of certain tumor types. Pursuant to the agreement, the Company and Regeneron will undertake one or more clinical trials using a combination of the compounds being developed by each entity. Under the agreement, each study will be conducted under terms set out in a separately agreed upon study plan that will identify the name of the sponsor and which party will manage the particular clinical trial, and include the protocol, the budget and a schedule of clinical obligations. The Company and Regeneron have not yet agreed to any study plan.

Pursuant to the terms of the agreement, each party granted the other party a non-exclusive license under its respective intellectual property and agreed to contribute the necessary resources needed to fulfill its respective obligations, in each case, under the terms of the to-be agreed upon study plans. Development costs of a particular clinical trial will be split equally between the Company and Regeneron.

The agreement may be terminated by either party if (i) there is no active study plan for which a final study report has not been completed, (ii) the parties have not entered into a study plan for an additional clinical trial within a period of time after the delivery of the most recent final study report or (iii) in the event of a material breach.

Events assessed for recognition subsequent to the original issuance of the consolidated financial statements

Forward stock split

On July 9, 2018, the Company effected a 1-for-9.94688 forward stock split of its issued and outstanding shares of common stock and a proportional adjustment to the existing conversion ratios for each series of the Company's Preferred Stock (see Note 7). Accordingly, all share and per share amounts for all periods presented in the accompanying consolidated financial statements and notes thereto have been adjusted retroactively, where applicable, to reflect this forward stock split and adjustment of the preferred stock conversion ratios. Further, on July 9, 2018, the Company's authorized shares of common stock were increased to 27,314,288. Accordingly, the authorized shares of common stock presented in the accompanying consolidated financial statements and notes thereto have been adjusted retroactively, where applicable, to reflect the newly authorized shares of common stock.

Events assessed for disclosure subsequent to the original issuance of the consolidated financial statements (unaudited)

Lease agreement

In June 2018, the Company entered into an agreement to lease approximately 63,000 square feet of office, manufacturing and laboratory space within a previously occupied building with approximately 106,000 square feet of rentable space in Framingham, Massachusetts. Pursuant to the lease agreement, the lease term is estimated to commence in November 2018, subject to the landlord completing certain agreed upon landlord improvements. The rent commencement date is estimated to be eight months after the commencement of the lease term. The initial lease term is ten years from the rent commencement

Replimune Group, Inc.

Notes to consolidated financial statements (Continued)

(Amounts in thousands, except share and per share amounts)

date and includes two optional five year extensions. Annual lease payments during the first year are $2,373 with increases of 3.0% each year.

Study plan for agreement with Regeneron

In June 2018, under the terms of the agreement between the Company and Regeneron, the parties agreed to the first study plan. The Company and Regeneron have agreed to the protocol, budget, sample testing and clinical obligations schedule under the study plan. Development and supply costs associated with the study plan will be split equally between the Company and Regeneron.

2018 Omnibus Incentive Compensation Plan

On July 9, 2018, the Company's board of directors adopted and the Company's stockholders approved the 2018 Omnibus Incentive Compensation Plan (the "2018 Plan"), which will become effective immediately prior to the effectiveness of the registration statement for the Company's initial public offering. The 2018 Plan provides for the issuance of incentive stock options, non-qualified stock options, stock awards, stock units, stock appreciation rights and other stock-based awards. The number of shares initially reserved for issuance under the 2018 Plan is 3,617,968 shares, which is equal to the sum of (i) 3,486,118 shares of the Company's common stock, plus (ii) the number of shares of the Company's common stock reserved for issuance under the 2017 Plan that remain available as of the effective date of the 2018 Plan (not to exceed 131,850 shares of the Company's common stock). If any options or stock appreciation rights, including outstanding options and stock appreciation rights granted under the 2017 Plan (up to 2,520,247 shares), terminate, expire, or are canceled, forfeited, exchanged, or surrendered without having been exercised, or if any stock awards, stock units or other stock-based awards, including outstanding awards granted under the 2017 Plan, are forfeited, terminated, or otherwise not paid in full in shares of common stock, the shares of the Company's common stock subject to such grants will be available for purposes of our 2018 Plan.

Employee Stock Purchase Plan

On July 9, 2018, the Company's board of directors adopted and the Company's stockholders approved the Employee Stock Purchase Plan (the "ESPP"), which will become effective immediately prior to the effectiveness of the registration statement for the Company's initial public offering. The total shares of common stock initially reserved for issuance under the ESPP will be limited to 348,612 shares. In addition, as of the first trading day of each fiscal year during the term of the ESPP (excluding any extensions), an additional number of shares of the Company's common stock equal to 1% of the total number of shares outstanding on the last trading day in the immediately preceding fiscal year or 697,224 shares, whichever is less (or such lesser amount as determined by the Company's board of directors) will be added to the number of shares authorized under the ESPP. If the total number of shares of common stock to be purchased pursuant to outstanding purchase rights on any particular date exceed the number of shares then available for issuance under the ESPP, then the plan administrator will allocate the available shares pro-rata and refund any excess payroll deductions or other contributions to participants.

6,700,000 shares

Replimune Group, Inc.

Common stock

, 2018

J.P. Morgan **Leerink Partners** **BMO Capital Markets**

Until , 2018 (25 days after the date of this prospectus), all dealers that effect buy, sell or trade shares of our Common Stock, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriter and with respect to their unsold allotments or subscriptions.

Part II
Information not required in prospectus

Item 13. Other expenses of issuance and distribution.

The following table sets forth the fees and expenses in connection with the sale of common stock being registered (excluding the underwriting discount). Except for the Securities and Exchange Commission, or SEC, registration fee and the Financial Industry Regulatory Authority, Inc., or FINRA, filing fee, all amounts are estimates.

	Amount paid or to be paid
SEC registration fee	$ 15,349
FINRA filing fee	18,992
Nasdaq listing fee	125,000
Legal fees and expenses	1,500,000
Accounting fees and expenses	802,268
Printing expenses	195,000
Transfer agent and registrar fees and expenses	5,000
Miscellaneous	38,391
Total	$ 2,700,000

Item 14. Indemnification of directors and officers.

Section 145 of the Delaware General Corporation Law, or DGCL, authorizes a corporation's board of directors to grant, and authorizes a court to award, indemnity to officers, directors and other corporate agents.

As permitted by Delaware law, our amended and restated certificate of incorporation to be in effect immediately prior to the completion of this offering provides that, to the fullest extent permitted by Delaware law, no director will be personally liable to us or our investors for monetary damages for breach of fiduciary duty as a director. Pursuant to Delaware law, such protection would be not available for liability:

- for any breach of a duty of loyalty to us or our investors;
- for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- for any transaction from which the director derived an improper benefit; or
- for an act or omission for which the liability of a director is expressly provided by an applicable statute, including unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the DGCL.

Our amended and restated certificate of incorporation to be in effect immediately prior to the completion of this offering also provides that if Delaware law is amended after the approval by our investors of the amended and restated certificate of incorporation to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law.

Our amended and restated bylaws to be in effect immediately prior to the completion of this offering further provide that we must indemnify our directors and officers to the fullest extent permitted by Delaware law. Our amended and restated bylaws also authorize us to indemnify any of our employees or agents and permit us to secure insurance on behalf of any officer, director, employee or agent for any liability arising out of his or her action in that capacity, whether or not Delaware law would otherwise permit indemnification.

In addition, our amended and restated bylaws to be in effect immediately prior to the completion of this offering provide that we are required to advance expenses to our directors and officers as incurred in connection with legal proceedings against them for which they may be indemnified and that the rights conferred in the amended and restated bylaws are not exclusive.

We have entered into indemnification agreements with each of our directors and executive officers. These agreements, among other things, would require us to indemnify each director and officer to the fullest extent permitted by Delaware law, the amended and restated certificate of incorporation and amended and restated bylaws, for expenses such as, among other things, attorneys' fees, judgments, fines and settlement amounts incurred by the director or executive officer in any action or proceeding, including any action by or in our right, arising out of the person's services as our director or executive officer or as the director or executive officer of any subsidiary of ours or any other company or enterprise to which the person provides services at our request. Upon the completion of the offering, we intend to obtain and maintain directors' and officers' liability insurance.

The SEC has taken the position that personal liability of directors for violation of the federal securities laws cannot be limited and that indemnification by us for any such violation is unenforceable. The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws, in each case, to be in effect immediately prior to the completion of this offering, may discourage stockholders from bringing a lawsuit against our directors and officers for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions.

Item 15. Recent sales of unregistered securities

Set forth below is information regarding securities issued by Replimune Group, Inc. within the past three years that were not registered under the Securities Act of 1933, as amended, or the Securities Act in each case, after giving effect to the 1-for-9.94688 forward stock split of our common stock:

In July 2017, in connection with the reorganization, we issued the following shares:

- an aggregate of 200,000 shares of our series seed preferred stock to our series seed investors;
- warrants convertible into an aggregate of 50,000 shares of our series seed preferred stock to our series seed investors;
- an aggregate of 864,533 shares of our series A preferred stock to our series A investors; and
- stock options to purchase an aggregate of 930,027 shares of common stock to our executive officers and employees.

In July 2017 and September 2017, we sold an aggregate of 861,415 shares of our series B preferred stock to our series B investors at a purchase price per share of $63.79 resulting in aggregate gross proceeds of approximately $55 million.

From July 2017 to July 9, 2018, we granted stock options under the 2017 Equity Compensation Plan, or our 2017 Plan, to purchase an aggregate of 1,598,008 shares of common stock at exercise prices ranging from $3.30 per share to $3.83 per share. During this period options to purchase 7,788 shares of common stock were exercised.

The offers and sales of the securities described in the foregoing paragraphs were exempt from registration under either (i) Rule 701 promulgated under the Securities Act in that the transactions were under compensatory benefit plans and contracts relating to compensation as provided under Rule 701 or (ii) in reliance on Regulation D, Rule 506 and/or Section 4(a)(2) under the Securities Act. With respect to the offers and sales that were exempt from registration under Rule 701, the recipients of such securities were our employees, directors or consultants and received the securities under our 2017 Plan. Appropriate legends were affixed to the securities issued in these transactions.

Item 16. Exhibits and financial statement schedules

(a) Exhibits

The exhibits to the registration statement are listed in the Exhibit Index attached hereto and incorporated by reference herein.

(b) Financial statement schedules

All financial statement schedules have been omitted because they are not required or because the required information is given in the consolidated financial statements or notes to those statements.

Item 17. Undertakings.

The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The Registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from a form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in

the form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Exhibit index

Number	Description
1.1	Form of Underwriting Agreement
3.1	Amended and Restated Certificate of Incorporation of the Registrant (conformed to include the amendments to the Amended and Restated Certificate of Incorporation filed on June 20, 2018 and July 9, 2018)
3.2#	Amended and Restated Bylaws of the Registrant, as currently in effect
3.3	Form of Amended and Restated Certificate of Incorporation of the Registrant, to become effective immediately prior to the completion of this offering
3.4	Form of Amended and Restated Bylaws of the Registrant, to become effective immediately prior to the completion of this offering
4.1	Form of Common Stock Certificate of the Registrant
4.2#	Amended and Restated Investors' Rights Agreement, dated July 10, 2017, by and among the Registrant and the investors set forth therein
5.1	Opinion of Morgan, Lewis & Bockius LLP
10.1	Form of Indemnification Agreement by and between the Registrant and its directors and officers
10.2†#	2017 Equity Compensation Plan and Sub-Plan for U.K. Employees and forms of agreements thereunder
10.3†	2018 Omnibus Incentive Compensation Plan and Sub-Plan for U.K. Employees and forms of agreements thereunder, to become effective immediately prior to the completion of this offering
10.4†	Employee Stock Purchase Plan, to become effective on the day immediately prior to the completion of this offering
10.5†#	Employment Agreement, effective as of October 1, 2015, by and between Robert Coffin and Replimune, Inc.
10.6†#	Employment Agreement, effective as of October 1, 2015, by and between Philip Astley-Sparke and Replimune, Inc.
10.7†#	Employment Agreement, effective as of November 1, 2015, by and between Pamela Esposito and Replimune, Inc.
10.8†	Employment Agreement, dated as of June 22, 2018, by and between Howard Kaufman and Replimune, Inc.
10.9†	Employment Agreement, dated as of September 16, 2015, by and between Colin Love and Replimune Limited
10.10#	Lease, dated as of April 1, 2016, by and between Cummings Properties, LLC and the Registrant
10.11#	Lease, dated as of April 4, 2016, by and between MEPC Milton Park No. 1 Limited and MEPC Milton Park No. 2 Limited, and the Registrant
10.12‡	Clinical Trial Collaboration and Supply Agreement, dated as of February 26, 2018, by and between Bristol-Myers Squibb Company and the Registrant
10.13‡	Master Clinical Trial Collaboration and Supply Agreement, dated as of May 29, 2018, by and between Regeneron Pharmaceuticals, Inc. and the Registrant
10.14#	Indenture of Lease, dated as of June 22, 2018, by and between CRP/King 33 NY Ave. Owner, L.L.C. and the Registrant
21.1#	Subsidiaries of the Registrant
23.1	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm
23.2	Consent of Morgan, Lewis & Bockius LLP. Reference is made to Exhibit 5.1
24.1#	Power of Attorney

Previously filed

* To be filed by amendment

† Indicates management contract or compensation plan

‡ Indicates confidential treatment has been requested with respect to specific portions of this exhibit. Omitted portions have been filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Signatures

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Woburn, Commonwealth of Massachusetts, on July 10, 2018.

REPLIMUNE GROUP, INC.

By: /s/ ROBERT COFFIN

Robert Coffin, Ph.D.
President, Chief Executive Officer and Director

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Name	Title	Date
/s/ ROBERT COFFIN Robert Coffin, Ph.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	July 10, 2018
/s/ PHILIP ASTLEY-SPARKE Philip Astley-Sparke	Executive Chairman, Treasurer, Secretary and Director	July 10, 2018
/s/ STEPHEN GORGOL Stephen Gorgol	Chief Accounting Officer (Principal Financial and Accounting Officer)	July 10, 2018
* Kapil Dhingra	Director	July 10, 2018
* Hyam Levitsky	Director	July 10, 2018
* Jason Rhodes	Director	July 10, 2018
* Joseph Slattery	Director	July 10, 2018
* Otello Stampacchia	Director	July 10, 2018

Name	Title	Date
*		
Sander Slootweg	Director	July 10, 2018
*		
Dieter Weinand	Director	July 10, 2018

*By: /s/ ROBERT COFFIN

Robert Coffin
Attorney-in-Fact

Exhibit 1.1

REPLIMUNE GROUP, INC.

[·] Shares of Common Stock

Underwriting Agreement

[·], 2018

J.P. Morgan Securities LLC
Leerink Partners LLC

As Representatives of the
several Underwriters listed
in Schedule 1 hereto

c/o J.P. Morgan Securities LLC
383 Madison Avenue
New York, New York 10179

c/o Leerink Partners LLC
One Federal Street, 37th Floor
Boston, Massachusetts 02110

Ladies and Gentlemen:

Replimune Group, Inc., a Delaware corporation (the "Company"), proposes to issue and sell to the several underwriters listed in Schedule 1 hereto (the "Underwriters"), for whom you are acting as representatives (the "Representatives"), an aggregate of [·] shares of common stock, par value $0.001 per share, of the Company (the "Underwritten Shares") and, at the option of the Underwriters, up to an additional [·] shares of common stock of the Company (the "Option Shares"). The Underwritten Shares and the Option Shares are herein referred to as the "Shares". The shares of common stock of the Company to be outstanding after giving effect to the sale of the Shares are referred to herein as the "Stock".

The Company hereby confirms its agreement with the several Underwriters concerning the purchase and sale of the Shares, as follows:

1. Registration Statement. The Company has prepared and filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended, and the rules and regulations of the Commission thereunder (collectively, the "Securities Act"), a registration statement (File No. 333-225846), including a prospectus, relating to the Shares. Such registration statement, as amended at the time it became effective, including the information, if any, deemed pursuant to Rule 430A, 430B or 430C under the Securities Act to be part of the registration statement at the time of its effectiveness ("Rule 430 Information"), is referred to herein as the "Registration Statement"; and as used herein, the term "Preliminary Prospectus" means each prospectus included in such registration statement (and any amendments

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thereto) before effectiveness, any prospectus filed with the Commission pursuant to Rule 424(a) under the Securities Act and the prospectus included in the Registration Statement at the time of its effectiveness that omits Rule 430 Information, and the term "Prospectus" means the prospectus in the form first used (or made available upon request of purchasers pursuant to Rule 173 under the Securities Act) in connection with confirmation of sales of the Shares. If the Company has filed an abbreviated registration statement pursuant to Rule 462(b) under the Securities Act (the "Rule 462 Registration Statement"), then any reference herein to the term "Registration Statement" shall be deemed to include such Rule 462 Registration Statement. Capitalized terms used but not defined herein shall have the meanings given to such terms in the Registration Statement and the Prospectus.

At or prior to the Applicable Time (as defined below), the Company had prepared the following information (collectively with the pricing information set forth on Annex A, the "Pricing Disclosure Package"): a Preliminary Prospectus dated [·], 2018 and each "free-writing prospectus" (as defined pursuant to Rule 405 under the Securities Act) listed on Annex A hereto.

"Applicable Time" means [·] [A/P].M., New York City time, on [·], 2018.

2. Purchase of the Shares.

(a) The Company agrees to issue and sell the Underwritten Shares to the several Underwriters as provided in this underwriting agreement (this "Agreement"), and each Underwriter, on the basis of the representations, warranties and agreements set forth herein and subject to the conditions set forth herein, agrees, severally and not jointly, to purchase at a price per share of $[·] (the "Purchase Price") from the Company the respective number of Underwritten Shares set forth opposite such Underwriter's name in Schedule 1 hereto.

In addition, the Company agrees to issue and sell the Option Shares to the several Underwriters as provided in this Agreement, and the Underwriters, on the basis of the representations, warranties and agreements set forth herein and subject to the conditions set forth herein, shall have the option to purchase, severally and not jointly, from the Company the Option Shares at the Purchase Price less an amount per share equal to any dividends or distributions declared by the Company and payable on the Underwritten Shares but not payable on the Option Shares.

If any Option Shares are to be purchased, the number of Option Shares to be purchased by each Underwriter shall be the number of Option Shares which bears the same ratio to the aggregate number of Option Shares being purchased as the number of Underwritten Shares set forth opposite the name of such Underwriter in Schedule 1 hereto (or such number increased as set forth in Section 10 hereof) bears to the aggregate number of Underwritten Shares being purchased from the Company by the several Underwriters, subject, however, to such adjustments to eliminate any fractional Shares as the Representatives in their sole discretion shall make.

The Underwriters may exercise the option to purchase Option Shares at any time in whole, or from time to time in part, on or before the thirtieth day following the date of the Prospectus, by written notice from the Representatives to the Company. Such notice shall set forth the aggregate number of Option Shares as to which the option is being exercised and the date and time when the Option Shares are to be delivered and paid for, which may be the same date and time as the Closing Date (as hereinafter defined) but shall not be earlier than the Closing Date nor later than the tenth full business day (as hereinafter defined) after the date of such notice (unless such time and date are postponed in accordance with the provisions of Section 10 hereof). Any such notice shall be given at least two business days prior to the date and time of delivery specified therein.

(b) The Company understands that the Underwriters intend to make a public offering of the Shares, and initially to offer the Shares on the terms set forth in the Pricing Disclosure Package. The Company acknowledges and agrees that the Underwriters may offer and sell Shares to or through any affiliate of an Underwriter.

(c) Payment for the Shares shall be made by wire transfer in immediately available funds to the account specified by the Company to the Representatives in the case of the Underwritten Shares, at the offices of Cravath, Swaine & Moore LLP, 825 Eighth Avenue, New York, New York 10019 at 10:00 A.M. New York City time on [·], 2018, or at such other time or place on the same or such other date, not later than the fifth business day thereafter, as the Representatives and the Company may agree upon in writing or, in the case of the Option Shares, on the date and at the time and place specified by the Representatives in the written notice of the Underwriters' election to purchase such Option Shares. The time and date of such payment for the Underwritten Shares is referred to herein as the "Closing Date", and the time and date for such payment for the Option Shares, if other than the Closing Date, is herein referred to as the "Additional Closing Date".

Payment for the Shares to be purchased on the Closing Date or the Additional Closing Date, as the case may be, shall be made against delivery to the Representatives for the respective accounts of the several Underwriters of the Shares to be purchased on such date or the Additional Closing Date, as the case may be, with any transfer taxes payable in connection with the sale of such Shares duly paid by the Company. Delivery of the Shares shall be made through the facilities of The Depository Trust Company ("DTC") unless the Representatives shall otherwise instruct.

(d) The Company acknowledges and agrees that the Representatives and the other Underwriters are acting solely in the capacity of an arm's length contractual counterparty to the Company with respect to the offering of Shares contemplated hereby (including in connection with determining the terms of the offering) and not as a financial advisor or a fiduciary to, or an agent of, the Company or any other person. Additionally, neither the Representatives nor any other Underwriter is advising the Company or any other person as to any legal, tax, investment, accounting or regulatory

matters in any jurisdiction. The Company shall consult with its own advisors concerning such matters and shall be responsible for making its own independent investigation and appraisal of the transactions contemplated hereby, and neither the Representatives nor the other Underwriters shall have any responsibility or liability to the Company with respect thereto. Any review by the Representatives and the other Underwriters of the Company, the transactions contemplated hereby or other matters relating to such transactions will be performed solely for the benefit of the Underwriters and shall not be on behalf of the Company.

3. Representations and Warranties of the Company. The Company represents and warrants to each Underwriter that:

(a) *Preliminary Prospectus.* No order preventing or suspending the use of any Preliminary Prospectus has been issued by the Commission, and each Preliminary Prospectus included in the Pricing Disclosure Package, at the time of filing thereof, complied in all material respects with the applicable requirements of the Securities Act, and no Preliminary Prospectus included in the Pricing Disclosure Package, at the time of filing thereof, contained any untrue statement of a material fact or omitted to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that the Company makes no representation or warranty with respect to any statements or omissions made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in any Preliminary Prospectus, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof.

(b) *Pricing Disclosure Package*. The Pricing Disclosure Package as of the Applicable Time did not, and as of the Closing Date and as of the Additional Closing Date, as the case may be, will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that the Company makes no representation or warranty with respect to any statements or omissions made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in such Pricing Disclosure Package, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof. No statement of material fact included in the Prospectus has been omitted from the Pricing Disclosure Package and no statement of material fact included in the Pricing Disclosure Package that is required to be included in the Prospectus has been omitted therefrom.

(c) *Issuer Free Writing Prospectus.* Other than the Registration Statement, the Preliminary Prospectus and the Prospectus, the Company (including its agents and

representatives, other than the Underwriters in their capacity as such) has not prepared, made, used, authorized, approved or referred to and will not prepare, make, use, authorize, approve or refer to any "written communication" (as defined in Rule 405 under the Securities Act) that constitutes an offer to sell or solicitation of an offer to buy the Shares (each such communication by the Company or its agents and representatives (other than a communication referred to in clause (i) below), an "Issuer Free Writing Prospectus") other than (i) any document not constituting a prospectus pursuant to Section 2(a)(10)(a) of the Securities Act or Rule 134 under the Securities Act or (ii) the documents listed on Annex A hereto, each electronic road show and any other written communications approved in writing in advance by the Representatives. Each such Issuer Free Writing Prospectus complies in all material respects with the Securities Act, has been or will be (within the time period specified in Rule 433) filed in accordance with the Securities Act (to the extent required thereby) and does not conflict with the information contained in the Registration Statement or the Pricing Disclosure Package, and, when taken together with the Preliminary Prospectus accompanying, or delivered prior to delivery of, such Issuer Free Writing Prospectus, did not, and as of the Closing Date and as of the Additional Closing Date, as the case may be, will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that the Company makes no representation or warranty with respect to any statements or omissions made in each such Issuer Free Writing Prospectus or Preliminary Prospectus in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in such Issuer Free Writing Prospectus or Preliminary Prospectus, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof.

(d) *Emerging Growth Company*. From the time of initial confidential submission of the Registration Statement to the Commission (or, if earlier, the first date on which the Company engaged directly or through any person authorized to act on its behalf in any Testing-the-Waters Communication) through the date hereof, the Company has been and is an "emerging growth company," as defined in Section 2(a) of the Securities Act (an "Emerging Growth Company"). "Testing-the-Waters Communication" means any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the Securities Act.

(e) *Testing-the-Waters Materials.* The Company (i) has not alone engaged in any Testing-the-Waters Communications other than Testing-the-Waters Communications with the consent of the Representatives with entities that are qualified institutional buyers within the meaning of Rule 144A under the Securities Act or institutions that are accredited investors within the meaning of Rule 501 under the Securities Act and (ii) has not authorized anyone other than the Representatives to

engage in Testing-the-Waters Communications. The Company reconfirms that the Representatives have been authorized to act on its behalf in undertaking Testing-the-Waters Communications by virtue of a writing substantially in the form of Exhibit A hereto. The Company has not distributed or approved for distribution any Written Testing-the-Waters Communications other than those listed on Annex B hereto. "Written Testing-the-Waters Communication" means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Securities Act. Any individual Written Testing-the-Waters Communication does not conflict with the information contained in the Registration Statement or the Pricing Disclosure Package, complied in all material respects with the applicable provisions of the Securities Act, and when taken together with the Pricing Disclosure Package as of the Applicable Time, did not, and as of the Closing Date and as of the Additional Closing Date, as the case may be, will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(f) *Registration Statement and Prospectus.* The Registration Statement has been declared effective by the Commission. No order suspending the effectiveness of the Registration Statement has been issued by the Commission, and no proceeding for that purpose or pursuant to Section 8A of the Securities Act against the Company or related to the offering of the Shares has been initiated or, to the best knowledge of the Company, threatened by the Commission; as of the applicable effective date of the Registration Statement and any post-effective amendment thereto, the Registration Statement and any such post-effective amendment complied and will comply in all material respects with the Securities Act, and did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein not misleading; and as of the date of the Prospectus and any amendment or supplement thereto and as of the Closing Date and as of the Additional Closing Date, as the case may be, the Prospectus will not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that the Company makes no representation or warranty with respect to any statements or omissions made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in the Registration Statement and the Prospectus and any amendment or supplement thereto, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof.

(g) *Financial Statements.* The financial statements (including the related notes thereto) of the Company and its consolidated subsidiaries included in the Registration Statement, the Pricing Disclosure Package and the Prospectus comply in all material respects with the applicable requirements of the Securities Act and present

fairly in all material respects the financial position of the Company and its consolidated subsidiaries as of the dates indicated and the results of their operations and the changes in their cash flows for the periods specified; such financial statements have been prepared in conformity with generally accepted accounting principles ("GAAP") in the United States applied on a consistent basis throughout the periods covered thereby, except unaudited financial statements, which are subject to normal year-end adjustments and do not contain certain footnotes as permitted by the applicable rules of the Commission, and any supporting schedules included in the Registration Statement present fairly in all material respects the information required to be stated therein; and the other financial information included in the Registration Statement, the Pricing Disclosure Package and the Prospectus has been derived from the accounting records of the Company and its consolidated subsidiaries and presents fairly in all material respects the information shown thereby.

(h) *No Material Adverse Change.* Since the date of the most recent financial statements of the Company included in the Registration Statement, the Pricing Disclosure Package and the Prospectus, (i) there has not been any material change in the capital stock (other than the issuance of shares of Common Stock upon exercise of stock options and warrants described as outstanding in, and the grant of options and awards

under existing equity incentive plans described in, the Registration Statement, the Pricing Disclosure Package and the Prospectus), short-term debt or long-term debt of the Company or any of its subsidiaries, or any dividend or distribution of any kind declared, set aside for payment, paid or made by the Company on any class of capital stock, or any material adverse change, or any development that would reasonably be expected to result in a prospective material adverse change, in or affecting the business, properties, management, financial position, stockholders' equity, results of operations or prospects of the Company and its subsidiaries taken as a whole; (ii) neither the Company nor any of its subsidiaries has entered into any transaction or agreement (whether or not in the ordinary course of business) that is material to the Company and its subsidiaries taken as a whole or incurred any liability or obligation, direct or contingent, that is material to the Company and its subsidiaries taken as a whole; and (iii) neither the Company nor any of its subsidiaries has sustained any loss or interference with its business that is material to the Company and its subsidiaries taken as a whole and that is either from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor disturbance or dispute or any action, order or decree of any court or arbitrator or governmental or regulatory authority, except in each case as otherwise disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

(i) *Organization and Good Standing.* The Company and each of its subsidiaries have been duly organized and are validly existing and in good standing under the laws of their respective jurisdictions of organization, are duly qualified to do business and are in good standing in each jurisdiction in which their respective ownership or lease of property or the conduct of their respective businesses requires

such qualification, and have all power and authority necessary to own or hold their respective properties and to conduct the businesses in which they are engaged, except where the failure to be so qualified or in good standing or have such power or authority would not, individually or in the aggregate, reasonably be expected to have a material adverse effect on the business, properties, management, financial position, stockholders' equity, results of operations or prospects of the Company and its subsidiaries taken as a whole or on the performance by the Company of its obligations under this Agreement (a "Material Adverse Effect"). The Company does not own or control, directly or indirectly, any corporation, association or other entity other than the subsidiaries listed in Exhibit 21 to the Registration Statement.

(j) *Capitalization.* The Company has an authorized capitalization as set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus under the heading "Capitalization"; all the outstanding shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable and are not subject to any pre-emptive or similar rights that have not been duly waived or satisfied; except as described in or expressly contemplated by the Registration Statement, the Pricing Disclosure Package and the Prospectus, there are no outstanding rights (including, without limitation, pre-emptive rights that have not been duly waived or satisfied), warrants or options to acquire, or instruments convertible into or exchangeable for, any shares of capital stock or other equity interests in the Company or any of its subsidiaries, or any contract, commitment, agreement, understanding or arrangement of any kind relating to the issuance of any capital stock of the Company or any such subsidiary, any such convertible or exchangeable securities or any such rights, warrants or options; the capital stock of the Company conforms in all material respects to the description thereof contained in the Registration Statement, the Pricing Disclosure Package and the Prospectus; and all the outstanding shares of capital stock or other equity interests of each subsidiary owned, directly or indirectly, by the Company have been duly and validly authorized and issued, are fully paid and non-assessable and are owned directly or indirectly by the Company, free and clear of any lien, charge, encumbrance, security interest, restriction on voting or transfer or any other claim of any third party.

(k) *Stock Options.* With respect to the stock options (the "Stock Options") granted pursuant to the stock-based compensation plans of the Company (the "Company Stock Plans"), (i) each Stock Option intended to qualify as an "incentive stock option" under Section 422 of the Internal Revenue Code of 1986, as amended (the "Code"), so qualifies, (ii) except, in each case, for any such matters as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, each grant of a Stock Option was duly authorized no later than the date on which the grant of such Stock Option was by its terms to be effective by all necessary corporate action, including, as applicable, approval by the board of directors of the Company (or a duly constituted and authorized committee thereof) and any required stockholder approval by

the necessary number of votes or written consents, and the award agreement governing such grant (if any) was duly executed and delivered by each party thereto, (iii) each such grant was made in accordance with the terms of the Company Stock Plans and all other applicable laws and regulatory rules or requirements, and (iv) each such grant was properly accounted for in accordance with GAAP in the financial statements (including the related notes) of the Company. The Company has not knowingly granted, and there is no and has been no policy or practice of the Company of granting, Stock Options prior to, or otherwise coordinating the grant of Stock Options with, the release or other public announcement of material information regarding the Company or its subsidiaries or their results of operations or prospects.

(l) *Due Authorization.* The Company has full right, power and authority to execute and deliver this Agreement and to perform its obligations hereunder; and all action required to be taken for the due and proper authorization, execution and delivery by it of this Agreement and the consummation by it of the transactions contemplated hereby has been duly and validly taken.

(m) *Underwriting Agreement.* This Agreement has been duly authorized, executed and delivered by the Company.

(n) *The Shares.* The Shares to be issued and sold by the Company hereunder have been duly authorized by the Company and, when issued and delivered and paid for as provided herein, will be duly and validly issued, will be fully paid and nonassessable and will conform in all material respects to the descriptions thereof in the Registration Statement, the Pricing Disclosure Package and the Prospectus; and the issuance of the Shares is not subject to any preemptive or similar rights that have not been duly waived or satisfied.

(o) *Description of the Underwriting Agreement.* This Agreement conforms in all material respects to the description thereof contained in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

(p) *No Violation or Default.* Neither the Company nor any of its subsidiaries is (i) in violation of its charter or by-laws or similar organizational documents; (ii) in default, and no event has occurred that, with notice or lapse of time or both, would constitute such a default, in the due performance or observance of any term, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or

to which any property or asset of the Company or any of its subsidiaries is subject; or (iii) in violation of any applicable law or statute or any judgment, order, rule or regulation of any court or arbitrator or governmental or regulatory authority, except, in the case of clauses (ii) and (iii) above, for any such default or violation that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(q) *No Conflicts.* The execution, delivery and performance by the Company of this Agreement, the issuance and sale of the Shares and the consummation of the transactions contemplated by this Agreement will not (i) conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, result in the termination, modification or acceleration of, or result in the creation or imposition of any lien, charge or encumbrance upon any property, right or asset of the Company or any of its subsidiaries pursuant to, any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any property, right or asset of the Company or any of its subsidiaries is subject, (ii) result in any violation of the provisions of the charter or by-laws or similar organizational documents of the Company or any of its subsidiaries or (iii) result in the violation of any law or statute or any judgment, order, rule or regulation of any court or arbitrator or governmental or regulatory authority, except, in the case of clauses (i) and (iii) above, for any such conflict, breach, violation, default, lien, charge or encumbrance that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(r) *No Consents Required.* No consent, approval, authorization, order, license, registration or qualification of or with any court or arbitrator or governmental or regulatory authority is required for the execution, delivery and performance by the Company of this Agreement, the issuance and sale of the Shares and the consummation of the transactions contemplated by this Agreement, except for the registration of the Shares under the Securities Act and such consents, approvals, authorizations, orders and registrations or qualifications as may be required by the Financial Industry Regulatory Authority, Inc. ("FINRA") and under applicable state securities laws in connection with the purchase and distribution of the Shares by the Underwriters.

(s) *Legal Proceedings.* Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there are no legal, governmental or regulatory investigations, actions, demands, claims, suits, arbitrations, inquiries or proceedings ("Actions") pending to which the Company or any of its subsidiaries is or may be a party or to which any property of the Company or any of its subsidiaries is or may be the subject that, individually or in the aggregate, if determined adversely to the Company or any of its subsidiaries, would reasonably be expected to have a Material Adverse Effect; to the best knowledge of the Company, no such Actions are threatened or contemplated by any governmental or regulatory authority or threatened by others; and (i) there are no current or pending Actions that are required under the Securities Act to be described in the Registration Statement, the Pricing Disclosure Package or the Prospectus that are not so described in the Registration Statement, the Pricing Disclosure Package and the Prospectus and (ii) there are no statutes, regulations or contracts or other documents that are required under the Securities Act to be filed as exhibits to the Registration Statement or described in the Registration Statement, the Pricing Disclosure

Package or the Prospectus that are not so filed as exhibits to the Registration Statement or described in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

(t) *Independent Accountants*. PricewaterhouseCoopers LLP, who have certified certain financial statements of the Company and its subsidiaries, is an independent registered public accounting firm with respect to the Company and its subsidiaries within the applicable rules and regulations adopted by the Commission and the Public Company Accounting Oversight Board (United States) and as required by the Securities Act.

(u) *Title to Real and Personal Property*. The Company and its subsidiaries have good and marketable title in fee simple (in the case of real property) to, or have valid rights to lease or otherwise use, all items of real and personal property that are material to the businesses of the Company and its subsidiaries taken as a whole, in each case free and clear of all liens, encumbrances, claims and defects and imperfections of title except those that (i) do not materially interfere with the use made and proposed to be made of such property by the Company and its subsidiaries or (ii) would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.

(v) *Intellectual Property.* The Company and its subsidiaries own or license rights to use inventions, patent rights, trademarks, service marks, trade names, trade dress, domain names, copyrights, licenses, know-how, trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures (including all registrations and applications for registration of, and all goodwill associated with, any of the foregoing, as applicable) (collectively, "Intellectual Property") described in the Registration Statement, the Pricing Disclosure Package and the Prospectus as being owned by or licensed to the Company and its subsidiaries, and, to the best knowledge of the Company, all other Intellectual Property used in or reasonably necessary for the conduct of their business as currently conducted and as proposed to be conducted in the Registration Statement, Pricing Disclosure Package or the Prospectus, and, to the best knowledge of the Company, such Intellectual Property rights are valid and enforceable. To the best knowledge of the Company, the conduct of the business of the Company and its subsidiaries does not, and the proposed conduct of such business as disclosed in the Registration Statement, Pricing Disclosure Package or the Prospectus will not, infringe, misappropriate or otherwise violate any Intellectual Property rights of any others. Except as described in the Registration Statement, Pricing Disclosure Package or the Prospectus, there is no pending or, to the Company's best knowledge, threatened action, suit, proceeding or claim by any others (i) that the Company or any of its subsidiaries infringes, misappropriates or otherwise violates the Intellectual Property of others, or (ii) challenging the validity, enforceability, scope or ownership of any Intellectual Property owned by or licensed to the Company or any of its subsidiaries or their rights therein. To the best knowledge of the Company, no third

party has infringed, misappropriated or otherwise violated any Intellectual Property owned by or exclusively licensed to the Company or any of its subsidiaries. To the best knowledge of Company, none of the Intellectual Property used by the Company or any of its subsidiaries in the conduct of its business has been obtained or is being used by the Company or any of its subsidiaries in material violation of any contractual obligation binding

on the Company or any of its subsidiaries. Except as set forth in the Registration Statement, Pricing Disclosure Package or the Prospectus, the Intellectual Property owned by the Company and its subsidiaries is solely owned by the Company or its subsidiaries free and clear of any liens or encumbrances. Neither the Company nor any of its subsidiaries is subject to any judgment, order, writ, injunction or decree of any court or any federal, state, local, foreign or other governmental department, commission, board, bureau, agency or instrumentality, domestic or foreign, or any arbitrator, nor has it entered into or is a party to any agreement made in settlement of any pending or threatened litigation, which materially restricts or impairs its use of any Intellectual Property. The Company and its subsidiaries have taken commercially reasonable steps, in accordance with normal industry practice for a company of like size and resources, to maintain the confidentiality of all Intellectual Property the value of which to the Company or any of its subsidiaries is contingent upon maintaining the confidentiality thereof, and neither the Company nor any of its subsidiaries is aware of any material disclosure of such Intellectual Property other than to employees, representatives, independent contractors, collaborators, licensors, licensees, agents and advisors of the Company and its subsidiaries, all of whom are bound by written obligations to maintain the confidentiality thereof. All founders, officers and other employees involved in the development of Intellectual Property for the Company and its subsidiaries have signed confidentiality and invention assignment agreements or similar agreements for the transfer, assignment, and/or licensing of Intellectual Property with the Company and its subsidiaries pursuant to which the Company and its subsidiaries either (i) have obtained ownership of and are the exclusive owners of, or (ii) have a valid and unrestricted right to exploit, sufficient for the conduct of their business, such Intellectual Property. No founder, officer or, to the Company's best knowledge, other employee of the Company is in or has been in material violation of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, non-disclosure agreement or any restrictive covenant to or with a former employer where the basis of such violation relates to such founder, officer or employee's relationship or activities with the Company or its subsidiaries, or otherwise relates to rights in the Intellectual Property owned or purported to be owned by or licensed to the Company or its subsidiaries.

(w) *Patents and Patent Applications*. All patents and patent applications owned by, co-owned by, or exclusively licensed to the Company or under which the Company has rights ("Patents and Patent Applications") have been duly and properly filed and are being diligently prosecuted and maintained; the parties prosecuting, or that have prosecuted, the Patents and Patent Applications have complied with their duty of

candor and disclosure to the applicable patent office in connection with such Patents and Patent Applications; and to the Company's best knowledge after due inquiry, there is no prior art that has rendered or may render any Patent or Patent Application invalid or unpatentable.

(x) *No Undisclosed Relationships*. No relationship, direct or indirect, exists between or among the Company or any of its subsidiaries, on the one hand, and the directors, officers, stockholders, customers, suppliers or other affiliates of the Company or any of its subsidiaries, on the other, that is required by the Securities Act to be described in each of the Registration Statement and the Prospectus and that is not so described in such documents and in the Pricing Disclosure Package.

(y) *Investment Company Act*. The Company is not and, after giving effect to the offering and sale of the Shares and the application of the proceeds thereof as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, will not be required to register as an "investment company" or an entity "controlled" by an "investment company" within the meaning of the Investment Company Act of 1940, as amended, and the rules and regulations of the Commission thereunder (collectively, the "Investment Company Act").

(z) *Taxes.* Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company and its subsidiaries have paid all federal, state, local and foreign taxes and filed all tax returns required to be paid or filed through the date hereof except for taxes being contested in good faith and for which reserves in accordance with GAAP in the United States have been taken; and except as otherwise disclosed in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus, there is no tax deficiency that has been, or would reasonably be expected to be, asserted against the Company or any of its subsidiaries or any of their respective properties or assets that would reasonably be expected to have a Material Adverse Effect.

(aa) *Licenses and Permits.* Except as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company and its subsidiaries possess all licenses, sub-licenses, certificates, permits and other authorizations issued by, and have made all declarations and filings with, the appropriate federal, state, local or foreign governmental or regulatory authorities that are necessary for the ownership or lease of their respective properties or the conduct of their respective businesses as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus, except where the failure to possess or make the same would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and except as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus, neither the Company nor any of its subsidiaries has received notice of any revocation or modification of any such license, sub-license, certificate, permit or authorization or has any reason to believe that any such license,

sub-license, certificate, permit or authorization will not be renewed in the ordinary course, except where the failure to pay or file or where such revocation, modification or nonrenewal would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(bb) *No Labor Disputes.* No labor disturbance by or dispute with employees of the Company or any of its subsidiaries exists or, to the best knowledge of the Company, is contemplated or threatened, and the Company is not aware of any existing or imminent labor disturbance by, or dispute with, the employees of any of its or its subsidiaries' principal suppliers, contractors or customers, except as would not reasonably be expected to have a Material Adverse Effect. Neither the Company nor any of its subsidiaries is a party to any collective bargaining agreement.

(cc) *Certain Environmental Matters*. (i) The Company and its subsidiaries (A) are in compliance with all applicable federal, state, local and foreign laws (including common law), rules, regulations, requirements, decisions, judgments, decrees, orders and other legally enforceable requirements relating to pollution or the protection of human health or safety, the environment or natural resources (collectively, "Environmental Laws"); (B) have obtained and are and have been in compliance with all permits, licenses, certificates or other authorizations or approvals required under any Environmental Laws to conduct their respective businesses; (C) are not a party to any order, decree or agreement that imposes any obligation or liability under any Environmental Law; and (D) have not received notice of any actual or potential liability or obligation under or relating to, or any actual or potential violation of, any Environmental Laws, including for the investigation or remediation of any disposal or release

of hazardous or toxic substances or wastes, pollutants or contaminants, and have no knowledge of any event or condition that would reasonably be expected to result in any such notice, and (ii) there are no costs or liabilities associated with Environmental Laws of or relating to the Company or its subsidiaries, except in the case of each of (i) and (ii) above, for any such matter as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and (iii) except as described in each of the Pricing Disclosure Package and the Prospectus, (A) there is no proceeding that is pending, or, to the Company's best knowledge, contemplated, against the Company or any of its subsidiaries under any Environmental Laws in which a governmental entity is also a party, other than such proceeding regarding which it is reasonably believed no monetary sanctions of $100,000 or more will be imposed, (B) the Company and its subsidiaries are not aware of any facts or issues regarding compliance with Environmental Laws that would reasonably be expected to have a material effect on the capital expenditures, earnings or competitive position of the Company and its subsidiaries, and (C) none of the Company or its subsidiaries anticipates material capital expenditures relating to any Environmental Laws.

(dd) *Compliance with ERISA.* (i) Each employee benefit plan, within the meaning of Section 3(3) of the Employee Retirement Income Security Act of 1974, as

amended ("ERISA"), for which the Company or any member of its "Controlled Group" (defined as any entity, whether or not incorporated, that is under common control with the Company within the meaning of Section 4001(a)(14) of ERISA or any entity that would be regarded as a single employer with the Company under Section 414(b),(c),(m) or (o) of the Code) would have any liability (each, a "Plan") has been maintained in compliance with its terms and the requirements of any applicable statutes, orders, rules and regulations, including but not limited to ERISA and the Code, in all material respects; (ii) no prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, has occurred with respect to any Plan, excluding transactions effected pursuant to a statutory or administrative exemption; (iii) no Plan is or ever has been subject to Section 302 of ERISA, Title IV of ERISA or Section 412 of the Code and no Plan is multiemployer plan" within the meaning of Section 4001(a)(3) of ERISA; (iv) each Plan that is intended to be qualified under Section 401(a) of the Code is subject to a favorable determination letter or advisory opinion, as applicable, from the IRS and no event has occurred and no condition exists, whether by action or by failure to act, that, to the Company's best knowledge, is reasonably likely to result in the revocation of any such determination or opinion, as applicable, and (v) none of the following events has occurred or, to the Company's best knowledge, is reasonably likely to occur: (A) a material increase in the aggregate amount of contributions required to be made to all Plans by the Company or its Controlled Group affiliates in the current fiscal year of the Company and its Controlled Group affiliates compared to the amount of such contributions made in the Company's and its Controlled Group affiliates' most recently completed fiscal year; or (B) a material increase in the Company and its subsidiaries' "accumulated post-retirement benefit obligations" (within the meaning of Accounting Standards Codification Topic 715-60) compared to the amount of such obligations in the Company and its subsidiaries' most recently completed fiscal year, except in each case with respect to the events or conditions set forth in (i) through (v) hereof, as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(ee) *Disclosure Controls*. The Company and its subsidiaries maintain an effective system of "disclosure controls and procedures" (as defined in Rule 13a-15(e) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) that complies with the requirements of the Exchange Act and that has been designed to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms, including controls and procedures designed to ensure that such information is accumulated and communicated to the Company's management as appropriate to allow timely decisions regarding required disclosure.

(ff) *Accounting Controls.* The Company and its subsidiaries maintain systems of "internal control over financial reporting" (as defined in Rule 13a-15(f) of the

Exchange Act) that comply with the requirements of the Exchange Act and have been designed by, or under the supervision of, their respective principal executive and principal financial officers, or persons performing similar functions, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. The Company and its subsidiaries maintain internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there are no material weaknesses in the Company's internal controls. The Company's auditors and the Audit Committee of the Board of Directors of the Company have been advised of: (i) all significant deficiencies and material weaknesses in the design or operation of internal controls over financial reporting which have adversely affected or are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and (ii) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal controls over financial reporting.

(gg) *Insurance.* The Company and its subsidiaries have insurance covering their respective properties, operations, personnel and businesses, including business interruption insurance and policies covering the Company and its subsidiaries for product liability claims and clinical trial liability claims, which insurance is in amounts and insures against such losses and risks as are adequate to protect the Company and its subsidiaries and their respective businesses; and neither the Company nor any of its subsidiaries has (i) received notice from any insurer or agent of such insurer that capital improvements or other expenditures are required or necessary to be made in order to continue such insurance or (ii) any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage at reasonable cost from similar insurers as may be necessary to continue its business.

(hh) *Cyber Security; Data Protection.* The Company and its subsidiaries' information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, "IT Systems and Data") are adequate for, and operate and perform in all material respects as required in connection with the operations of the business of the Company and its subsidiaries as currently

conducted, free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants. The Company and its subsidiaries have implemented and maintained commercially reasonable controls, policies, procedures,

and safeguards to maintain and protect their material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and Data (including all personal, personally identifiable, sensitive, confidential or regulated data ("Personal Data")) used in connection with their businesses, and there have been no breaches, violations, outages or unauthorized uses of or accesses to same, except for those that have been remedied without material cost or liability or the duty to notify any other person, nor any incidents under internal review or investigations relating to the same. The Company and its subsidiaries are presently in material compliance with all applicable laws or statutes and all applicable judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Personal Data and to the protection of such IT Systems and Personal Data from unauthorized use, access, misappropriation or modification. The Company and its subsidiaries have taken all required actions to prepare to comply with the European Union General Data Protection Regulation (and all other applicable laws and regulations with respect to Personal Data that have been announced as of the date hereof as becoming effective within 12 months after the date hereof, and for which any non-compliance with the same would be reasonably likely to create a material liability) as soon as they take effect.

(ii) *No Unlawful Payments.* Neither the Company nor any of its subsidiaries nor, any director, officer or employee of the Company or any of its subsidiaries nor, to the best knowledge of the Company, any agent, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries has (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity; (ii) made or taken an act in furtherance of an offer, promise or authorization of any direct or indirect unlawful payment or benefit to any foreign or domestic government official or employee, including of any government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office; (iii) violated or is in violation of any provision of the Foreign Corrupt Practices Act of 1977, as amended, or any applicable law or regulation implementing the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, or committed an offence under the Bribery Act 2010 of the United Kingdom or any other applicable anti-bribery or anti-corruption law; or (iv) made, offered, agreed, requested or taken an act in furtherance of any unlawful bribe or other unlawful benefit, including, without limitation, any rebate, payoff, influence payment, kickback or other unlawful or improper payment or benefit. The Company and its subsidiaries have instituted, maintain and enforce, and will continue to maintain and enforce policies and procedures designed to promote and ensure compliance with all applicable anti-bribery and anti-corruption laws.

(jj) *Compliance with Anti-Money Laundering Laws*. The operations of the Company and its subsidiaries are and have been conducted at all times in compliance

with applicable financial recordkeeping and reporting requirements, including those of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the applicable money laundering statutes of all jurisdictions where the Company or any of its subsidiaries conducts business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines issued, administered or enforced by any governmental agency (collectively, the "Anti-Money Laundering Laws"), and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Anti-Money Laundering Laws is pending or, to the best knowledge of the Company, threatened.

(kk) *No Conflicts with Sanctions Laws.* Neither the Company nor any of its subsidiaries, directors, officers, or employees, nor, to the best knowledge of the Company, any agent, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries is currently the subject or the target of any sanctions administered or enforced by the U.S. government (including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury ("OFAC") or the U.S. Department of State and including, without limitation, the designation as a "specially designated national" or "blocked person"), the United Nations Security Council ("UNSC"), the European Union, Her Majesty's Treasury ("HMT") or other relevant sanctions authority (collectively, "Sanctions"), nor is the Company or any of its subsidiaries located, organized or resident in a country or territory that is the subject or target of Sanctions, including, without limitation, Crimea, Cuba, Iran, North Korea and Syria (each, a "Sanctioned Country"); and the Company will not directly or indirectly use the proceeds of the offering of the Shares hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund or facilitate any activities of or business with any person that, at the time of such funding or facilitation, is the subject or target of Sanctions, (ii) to fund or facilitate any activities of or business in any Sanctioned Country or (iii) in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions. Since their respective inceptions, the Company and its subsidiaries have not knowingly engaged in and are not now knowingly engaged in any dealings or transactions with any person that at the time of the dealing or transaction is or was the subject or the target of Sanctions or with any Sanctioned Country.

(ll) *No Restrictions on Subsidiaries*. No subsidiary of the Company is currently prohibited, directly or indirectly, under any agreement or other instrument to which it is a party or is subject, from paying any dividends to the Company, from making any other distribution on such subsidiary's capital stock or similar ownership interest, from repaying to the Company any loans or advances to such subsidiary from the Company or from transferring any of such subsidiary's properties or assets to the Company or any other subsidiary of the Company.

(mm) *No Broker's Fees.* Neither the Company nor any of its subsidiaries is a party to any contract, agreement or understanding with any person (other than this Agreement) that would give rise to a valid claim against any of them or any Underwriter for a brokerage commission, finder's fee or like payment in connection with the offering and sale of the Shares.

(nn) *No Registration Rights*. No person has the right to require the Company or any of its subsidiaries to register any securities for sale under the Securities Act by reason of the filing of the Registration Statement with the Commission or the issuance and sale of the Shares, other than rights that have been validly waived.

(oo) *No Stabilization.* Neither the Company nor any of its subsidiaries has taken, directly or indirectly, any action designed to or that would reasonably be expected to cause or result in any stabilization or manipulation of the price of the Shares.

(pp) *Margin Rules*. Neither the issuance, sale and delivery of the Shares nor the application of the proceeds thereof by the Company as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus will violate Regulation T, U or X of the Board of Governors of the Federal Reserve System or any other regulation of such Board of Governors.

(qq) *Forward-Looking Statements.* No forward-looking statement (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) included in any of the Registration Statement, the Pricing Disclosure Package or the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

(rr) *Statistical and Market Data.* Nothing has come to the attention of the Company that has caused the Company to believe that the statistical and market-related data included in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus is not based on or derived from sources that are reliable and accurate in all material respects.

(ss) *Sarbanes-Oxley Act.* There is and has been no failure on the part of the Company or any of the Company's directors or officers, in their capacities as such, to comply with any provision of the Sarbanes-Oxley Act of 2002, as amended and the rules and regulations promulgated in connection therewith (the "Sarbanes-Oxley Act"), including Section 402 related to loans.

(tt) *Status under the Securities Act*. At the time of filing the Registration Statement and any post-effective amendment thereto, at the earliest time thereafter that the Company or any offering participant made a *bona fide* offer (within the meaning of Rule 164(h)(2) under the Securities Act) of the Shares and at the date hereof, the Company was not and is not an "ineligible issuer," as defined in Rule 405 under the

Securities Act. The Company has paid the registration fee for this offering pursuant to the applicable rules under the Securities Act.

(uu) *No Ratings*. There are (and prior to the Closing Date, will be) no debt securities or preferred stock issued or guaranteed by the Company or any of its subsidiaries that are rated by a "nationally recognized statistical rating organization", as such term is defined in Section 3(a)(62) under the Exchange Act.

(vv) *No Indebtedness*. Except as otherwise disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company and its subsidiaries have no outstanding indebtedness for borrowed money.

(ww) *No Contract Terminations*. The Company has not sent or received any communication regarding termination of, or intent not to renew, any of the contracts or agreements described in any Preliminary Prospectus, the Prospectus, any Issuer Free Writing Prospectus or any Written Testing-the-Waters Communications, or referred to or described in, or filed as an exhibit to, the Registration Statement, and no such termination or non-renewal has been threatened by the Company or, to the Company's best knowledge, any other party to any such contract or agreement, which threat of termination or non-renewal has not been rescinded as of the date hereof.

(xx) *Preclinical and Clinical Trials*. Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus: (i) the preclinical and clinical studies and trials conducted by or, to the best knowledge of the Company after due inquiry, that were conducted on behalf of or sponsored by the Company or its subsidiaries, or in which the Company or its subsidiaries have participated (collectively "Company Trials"), in each case including the Company's studies and trials that are described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, or the results of which are referred to in the Registration Statement, the Pricing Disclosure Package and the Prospectus, as applicable, were, and if still pending are, being conducted in all material respects in accordance with all applicable standard medical and scientific research standards and procedures and all applicable statutes and all applicable rules and regulations of the U.S. Food and Drug Administration ("FDA"), the Department of Health and Human Services and comparable regulatory agencies outside of the United States to which they are subject, including the European Medicines Agency (collectively, the "Regulatory Authorities"), and applicable current Good Clinical Practice and Good Laboratory Practice requirements as detailed in applicable statutes, rules and regulations of an applicable Regulatory Authority; (ii) the descriptions in the Registration Statement, the Pricing Disclosure Package and the Prospectus of the Company Trials, including the results of the Company Trials, are accurate and complete descriptions in all material respects and fairly present the data derived therefrom; (iii) the Company has no knowledge of any other studies or trials not described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the results of which are inconsistent with or call into question the results of the Company Trials

described or referred to in the Registration Statement, the Pricing Disclosure Package and the Prospectus; (iv) neither the Company nor any of its subsidiaries, nor, to the Company's best knowledge after due inquiry, any of its collaboration partners, have received any written notices, written correspondence or other written communications from the Regulatory Authorities or any other governmental agency requiring or threatening the termination, material modification or suspension of any Company Trial that is described in the Registration Statement, the Pricing Disclosure Package and the Prospectus or the results of which are referred to in the Registration Statement, the Pricing Disclosure Package and the Prospectus, other than ordinary course communications with respect to modifications in connection with the design and implementation of such Company Trials, and, to the Company's best knowledge after due inquiry, there are no reasonable grounds for the same; (v) to the Company's best knowledge after due inquiry, the Company has obtained (or caused to be obtained) informed consent by or on behalf of each human subject who participated in a Company Trial; (vi) in using or disclosing patient information received by the Company in connection with the Company Trials, the Company has complied in all material respects with all applicable laws and regulatory rules or requirements; and (vii) to the Company's best knowledge after due

inquiry, none of the Company Trials involved any investigator who has been disqualified as a clinical investigator by any Regulatory Authority or has been found by any Regulatory Authority to have engaged in scientific misconduct.

(yy) *Product Candidates*. Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company: (i) has operated and currently operates its business in compliance in all material respects with applicable provisions of the Health Care Laws (as defined below) applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, storage, import, export or disposal of any of the Company's product candidates; (ii) has not received any FDA Form 483, written notice of adverse finding, warning letter, untitled letter or other written correspondence or written notice from any court or arbitrator, Regulatory Authority or other governmental or regulatory authority alleging or asserting non-compliance with (A) any Health Care Laws or (B) or any licenses, certificates, approvals, clearances, exemptions, authorizations, permits and supplements or amendments thereto required by any such Health Care Laws ("Regulatory Authorizations"); (iii) possesses all Regulatory Authorizations required to conduct its business as currently conducted and such Regulatory Authorizations are valid and in full force and effect and the Company is not in violation, in any material respect, of any term of any such Regulatory Authorizations; (iv) has not received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any of the Regulatory Authorities or any other third party alleging that any product operation or activity is in material violation of any Health Care Laws or Regulatory Authorizations and has no knowledge that any of the Regulatory Authorities or any other third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding that would, individually or in the aggregate, reasonably be

expected to have a Material Adverse Effect; (v) has not received written notice that any of the Regulatory Authorities has taken, is taking or intends to take action to limit, suspend, modify or revoke any Regulatory Authorizations and has no knowledge that any of the Regulatory Authorities is considering such action that would, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; (vi) is not a party to or have any ongoing reporting obligations pursuant to any corporate integrity agreements, deferred prosecution agreements, monitoring agreements, consent decrees, settlement orders, plans of correction or similar agreements with or imposed by any Regulatory Authority; and (vii)(A) has not, nor have any of its directors, officers or, to the Company's best knowledge, employees, been excluded, suspended or debarred by a Regulatory Authority from participation in any government health care program or human clinical research or (B), to the best knowledge of the Company after due inquiry, is not, and none of its directors, officers or employees is, subject to a governmental inquiry, investigation, proceeding, or other similar action that would reasonably be expected to result in debarment, suspension, or exclusion by a Regulatory Authority. For purposes of this Agreement, "Health Care Laws" means, to the extent applicable to the Company, all health care laws applicable to the Company, including, but not limited to: Title XVIII of the Social Security Act, 42 U.S.C. §§ 1395-1395hhh (the Medicare statute); Title XIX of the Social Security Act, 42 U.S.C. §§ 1396-1396v (the Medicaid statute); the Federal Anti-Kickback Statute, 42 U.S.C. § 1320a-7b(b); the civil False Claims Act, 31 U.S.C. §§ 3729 et seq.; the criminal False Claims Act 42 U.S.C. 1320a-7b(a); any criminal laws relating to health care fraud and abuse, including but not limited to 18 U.S.C. Sections 286 and 287 and the health care fraud criminal provisions under the Health Insurance Portability and Accountability Act of 1996, 42 U.S.C. §§ 1320d et seq., ("HIPAA"); the Physician Payments Sunshine Act, 42 U.S.C. § 1320a-7h; the Exclusion Laws, 42 U.S.C. § 1320a-7; the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §§ 301 et seq.; the Public Health Service Act, 42 U.S.C. §§ 201 et seq.; the regulations promulgated pursuant to such laws; and any similar federal, state and local laws and regulations, in each case of the foregoing laws and regulations, as amended from time to time.

(zz) *Manufacturing*. To the Company's best knowledge, the contract manufacturing facilities and GMP operations of its suppliers are operated in compliance in all material respects with all applicable statutes, rules and regulations of the Regulatory Authorities.

(aaa) *Regulatory Filings*. The Company has not failed to file with the Regulatory Authorities any required filing, declaration, listing, registration, report or submission with respect to the Company's product candidates that are described or referred to in the Registration Statement, the Pricing Disclosure Package and the Prospectus; all such filings, declarations, reports or submissions were in material compliance with the applicable Health Care Laws when filed; and no material deficiencies regarding compliance with applicable law have been asserted by any

Regulatory Authority with respect to any such filings, declarations, reports or submissions.

4. Further Agreements of the Company. The Company covenants and agrees with each Underwriter that:

(a) *Required Filings.* The Company will file the final Prospectus with the Commission within the time periods specified by Rule 424(b) and Rule 430A, 430B or 430C under the Securities Act, will file any Issuer Free Writing Prospectus to the extent required by Rule 433 under the Securities Act; and will furnish copies of the Prospectus and each Issuer Free Writing Prospectus (to the extent not previously delivered) to the Underwriters in New York City prior to 10:00 A.M., New York City time, on the business day next succeeding the date of this Agreement in such quantities as the Representatives may reasonably request.

(b) *Delivery of Copies.* The Company will deliver, without charge, (i) to the Representatives upon request two signed copies of the Registration Statement as originally filed and each amendment thereto, in each case including all exhibits and consents filed therewith; and (ii) to each Underwriter (A) a conformed copy of the Registration Statement as originally filed and each amendment thereto (without exhibits) and (B) during the Prospectus Delivery Period (as defined below), as many copies of the Prospectus (including all amendments and supplements thereto and each Issuer Free Writing Prospectus) as the Representatives may reasonably request. As used herein, the term "Prospectus Delivery Period" means such period of time after the first date of the public offering of the Shares as in the opinion of counsel for the Underwriters a prospectus relating to the Shares is required by law to be delivered (or required to be delivered but for Rule 172 under the Securities Act) in connection with sales of the Shares by any Underwriter or dealer.

(c) *Amendments or Supplements, Issuer Free Writing Prospectuses.* Before making, preparing, using, authorizing, approving, referring to or filing any Issuer Free Writing Prospectus, and before filing any amendment or supplement to the Registration Statement, the Pricing Disclosure Package or the Prospectus, the Company will furnish to the Representatives and counsel for the Underwriters a copy of the proposed

Issuer Free Writing Prospectus, amendment or supplement for review and will not make, prepare, use, authorize, approve, refer to or file any such Issuer Free Writing Prospectus or file any such proposed amendment or supplement to which the Representatives reasonably object.

(d) *Notice to the Representatives.* The Company will advise the Representatives promptly, and confirm such advice in writing (which confirmations may be delivered by e-mail), (i) when the Registration Statement has become effective; (ii) when any amendment to the Registration Statement has been filed or becomes effective; (iii) when any supplement to the Pricing Disclosure Package, the Prospectus, any Issuer

Free Writing Prospectus or any Written Testing-the-Waters Communication or any amendment to the Prospectus has been filed or distributed; (iv) of any request by the Commission for any amendment to the Registration Statement or any amendment or supplement to the Prospectus or the receipt of any comments from the Commission relating to the Registration Statement or any other request by the Commission for any additional information including, but not limited to, any request for information concerning any Testing-the-Waters Communication; (v) of the issuance by the Commission or any other applicable governmental or regulatory authority of any order suspending the effectiveness of the Registration Statement or preventing or suspending the use of any Preliminary Prospectus, any of the Pricing Disclosure Package, the Prospectus or any Written Testing-the-Waters Communication or the initiation or threatening of any proceeding for that purpose or pursuant to Section 8A of the Securities Act; (vi) of the occurrence of any event or development within the Prospectus Delivery Period as a result of which the Prospectus, any of the Pricing Disclosure Package, any Issuer Free Writing Prospectus or any Written Testing-the-Waters Communication as then amended or supplemented would include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing when the Prospectus, the Pricing Disclosure Package, any such Issuer Free Writing Prospectus or any Written Testing-the-Waters Communication is delivered to a purchaser, not misleading; and (vii) of the receipt by the Company of any notice with respect to any suspension of the qualification of the Shares for offer and sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; and the Company will use its commercially reasonable best efforts to prevent the issuance of any such order suspending the effectiveness of the Registration Statement, preventing or suspending the use of any Preliminary Prospectus, any of the Pricing Disclosure Package or the Prospectus or any Written Testing-the-Waters Communication or suspending any such qualification of the Shares and, if any such order is issued, will obtain as soon as possible the withdrawal thereof.

(e) *Ongoing Compliance.* (1) If during the Prospectus Delivery Period (i) any event or development shall occur or condition shall exist as a result of which the Prospectus as then amended or supplemented would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances existing when the Prospectus is delivered to a purchaser, not misleading or (ii) it is necessary to amend or supplement the Prospectus to comply with applicable law, the Company will promptly notify the Underwriters thereof and forthwith prepare and, subject to paragraph (c) above, file with the Commission and furnish to the Underwriters and to such dealers as the Representatives may designate such amendments or supplements to the Prospectus as may be necessary so that the statements in the Prospectus as so amended or supplemented will not, in the light of the circumstances existing when the Prospectus is delivered to a purchaser, be misleading or so that the Prospectus will comply with applicable law and (2) if at any

time prior to the Closing Date (i) any event or development shall occur or condition shall exist as a result of which the Pricing Disclosure Package as then amended or supplemented would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances existing when the Pricing Disclosure Package is delivered to a purchaser, not misleading or (ii) it is necessary to amend or supplement the Pricing Disclosure Package to comply with applicable law, the Company will promptly notify the Underwriters thereof and forthwith prepare and, subject to paragraph (c) above, file with the Commission (to the extent required) and furnish to the Underwriters and to such dealers as the Representatives may designate such amendments or supplements to the Pricing Disclosure Package as may be necessary so that the statements in the Pricing Disclosure Package as so amended or supplemented will not, in the light of the circumstances existing when the Pricing Disclosure Package is delivered to a purchaser, be misleading or so that the Pricing Disclosure Package will comply with applicable law.

(f) *Blue Sky Compliance.* The Company will qualify the Shares for offer and sale under the securities or Blue Sky laws of such jurisdictions as the Representatives shall reasonably request and will continue such qualifications in effect so long as required for distribution of the Shares; provided that the Company shall not be required to (i) qualify as a foreign corporation or other entity or as a dealer in securities in any such jurisdiction where it would not otherwise be required to so qualify, (ii) file any general consent to service of process in any such jurisdiction or (iii) subject itself to taxation in any such jurisdiction if it is not otherwise so subject.

(g) *Earning Statement.* The Company will make generally available to its security holders and the Representatives as soon as practicable an earning statement that satisfies the provisions of Section 11(a) of the Securities Act and Rule 158 of the Commission promulgated thereunder covering a period of at least twelve months beginning with the first fiscal quarter of the Company occurring after the “effective date” (as defined in Rule 158) of the Registration Statement; provided that the Company will be deemed to have furnished such statements to its security holders and the Representatives to the extent they are filed on the Commission’s Electronic Data Gathering, Analysis, and Retrieval system (“EDGAR”) or any successor system.

(h) *Clear Market.* For a period of 180 days after the date of the Prospectus, the Company will not (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, or file with, or submit to, the Commission a registration statement under the Securities Act relating to, any shares of Stock or any securities convertible into or exercisable or exchangeable for Stock, or publicly disclose the intention to make any offer, sale, pledge, disposition, submission or filing (other than filings on Form S-8 relating to the Company Stock Plans), or (ii) enter into any swap or other agreement that transfers, in whole or in part,

any of the economic consequences of ownership of the Stock or any such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Stock or such other securities, in cash or otherwise, without the prior written consent of the Representatives, other than (A) the Shares to be sold hereunder, (B) any shares of Stock of the Company issued upon the exercise of options granted under Company Stock Plans and (C) the filing by the Company of any registration statement on Form S-8 or a successor form thereto relating to a Company Stock Plan described in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

(i) If the Representatives agree to release or waive the restrictions set forth in a lock-up letter described in Section 6(l) hereof for an officer or director of the Company and provide the Company with notice of the impending release or waiver substantially in the form of Exhibit B hereto at least three business days before the effective date of the release or waiver, the Company agrees to announce the impending release or waiver by a press release substantially in the form of Exhibit C hereto through a major news service at least two business days before the effective date of the release or waiver.

(j) *Use of Proceeds.* The Company will apply the net proceeds from the sale of the Shares as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus under the heading "Use of proceeds".

(k) *No Stabilization.* The Company will not take, directly or indirectly, any action designed to or that would reasonably be expected to cause or result in any stabilization or manipulation of the price of the Stock.

(l) *Exchange Listing.* The Company will use its reasonable best efforts to list, subject to notice of issuance, the Shares on the Nasdaq Global Market (the "Nasdaq Market").

(m) *Reports.* For a period of three years from the date of this Agreement, the Company will furnish to the Representatives, as soon as they are available, copies of all reports or other communications (financial or other) furnished to holders of the Shares, and copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange or automatic quotation system; provided the Company will be deemed to have furnished such reports and financial statements to the Representatives to the extent they are filed on EDGAR.

(n) *Record Retention*. The Company will, pursuant to reasonable procedures developed in good faith, retain copies of each Issuer Free Writing Prospectus that is not filed with the Commission in accordance with Rule 433 under the Securities Act.

(o) *Filings.* The Company will file with the Commission such reports as may be required by Rule 463 under the Securities Act.

(p) *Emerging Growth Company*. The Company will promptly notify the Representatives if the Company ceases to be an Emerging Growth Company at any time prior to the later of (i) completion of the distribution of Shares within the meaning of the Securities Act and (ii) completion of the 180-day restricted period referred to in Section 4(h) hereof.

5. Certain Agreements of the Underwriters. Each Underwriter hereby represents and agrees that:

(a) It has not used, authorized use of, referred to or participated in the planning for use of, and will not use, authorize use of, refer to or participate in the planning for use of, any "free writing prospectus", as defined in Rule 405 under the Securities Act (which term includes use of any written information furnished to the Commission by the Company and not incorporated by reference into the Registration Statement and any press release issued by the Company) other than (i) a free writing prospectus that contains no "issuer information" (as defined in Rule 433(h)(2) under the Securities Act) that was not included in the Preliminary Prospectus or a previously filed Issuer Free Writing Prospectus, (ii) any Issuer Free Writing Prospectus listed on Annex A or prepared pursuant to Section 3(c) or Section 4(c) above (including any electronic road show), or (iii) any free writing prospectus prepared by such Underwriter and approved by the Company in advance in writing (each such free writing prospectus referred to in clauses (i) or (iii), an "Underwriter Free Writing Prospectus").

(b) It has not and will not, without the prior written consent of the Company, use any free writing prospectus that contains the final terms of the Shares unless such terms have previously been included in a free writing prospectus filed with the Commission; *provided* that Underwriters may use a term sheet substantially in the form of Annex C hereto without the consent of the Company; *provided further* that any Underwriter using such term sheet shall notify the Company, and provide a copy of such term sheet to the Company, prior to, or substantially concurrently with, the first use of such term sheet.

(c) It is not subject to any pending proceeding under Section 8A of the Securities Act with respect to the offering (and will promptly notify the Company if any such proceeding against it is initiated during the Prospectus Delivery Period).

6. Conditions of Underwriters' Obligations. The obligation of each Underwriter to purchase the Underwritten Shares on the Closing Date or the Option Shares on the Additional Closing Date, as the case may be, as provided herein is subject to the performance by the Company of its covenants and other obligations hereunder and to the following additional conditions:

(a) *Registration Compliance; No Stop Order.* No order suspending the effectiveness of the Registration Statement shall be in effect, and no proceeding for such

purpose or pursuant to Section 8A under the Securities Act shall be pending before or threatened by the Commission; the Prospectus and each Issuer Free Writing Prospectus shall have been timely filed with the Commission under the Securities Act (in the case of an Issuer Free Writing Prospectus, to the extent required by Rule 433 under the Securities Act) and in accordance with Section 4(a) hereof; and all requests by the Commission for additional information shall have been complied with to the reasonable satisfaction of the Representatives.

(b) *Representations and Warranties.* The representations and warranties of the Company contained herein shall be true and correct on the date hereof and on and as of the Closing Date or the Additional Closing Date, as the case may be; and the statements of the Company and its officers made in any certificates delivered pursuant to this Agreement shall be true and correct on and as of the Closing Date or the Additional Closing Date, as the case may be.

(c) *No Material Adverse Change.* No event or condition of a type described in Section 3(g) hereof shall have occurred or shall exist, which event or condition is not described in the Pricing Disclosure Package (excluding any amendment or supplement thereto) and the Prospectus (excluding any amendment or supplement thereto) and the effect of which in the judgment of the Representatives makes it impracticable or inadvisable to proceed with the offering, sale or delivery of the Shares on the Closing Date or the Additional Closing Date, as the case may be, on the terms and in the manner contemplated by this Agreement, the Pricing Disclosure Package and the Prospectus.

(d) *Officer's Certificate.* The Representatives shall have received on and as of the Closing Date or the Additional Closing Date, as the case may be, a certificate of the chief financial officer or chief accounting officer of the Company and one additional senior executive officer of the Company who is satisfactory to the Representatives (i) confirming that such officers have carefully reviewed the Registration Statement, the Pricing Disclosure Package and the Prospectus and, to the knowledge of such officers, the representations set forth in Sections 3(b) and 3(d) hereof are true and correct, (ii) confirming that the other representations and warranties of the Company in this Agreement are true and correct and that the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied hereunder at or prior to the Closing Date or the Additional Closing Date, as the case may be, and (iii) to the effect set forth in paragraphs (a) and (c) above.

(e) *Comfort Letters.* On the date of this Agreement and on the Closing Date or the Additional Closing Date, as the case may be, PricewaterhouseCoopers LLP shall have furnished to the Representatives, at the request of the Company, letters, dated the respective dates of delivery thereof and addressed to the Underwriters, in form and substance reasonably satisfactory to the Representatives, containing statements and information of the type customarily included in accountants' "comfort letters" to underwriters with respect to the financial statements and certain financial information

contained in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus; provided, that the letter delivered on the Closing Date or the Additional Closing Date, as the case may be, shall use a "cut-off" date no more than three business days prior to such Closing Date or such Additional Closing Date, as the case may be.

(f) *Opinion and 10b-5 Statement of Counsel for the Company.* Morgan, Lewis & Bockius LLP, counsel for the Company, shall have furnished to the Representatives, at the request of the Company, their written opinion and 10b-5 statement, dated the Closing Date or the Additional Closing Date, as the case may be, and addressed to the Underwriters, in form and substance reasonably satisfactory to the Representatives, to the effect set forth in Annex D hereto.

(g) *Opinion of Intellectual Property Counsel for the Company*. J.A. Kemp & Co., intellectual property counsel for the Company, shall have furnished to the Representatives, at the request of the Company, their written opinion, dated the Closing Date or the Additional Closing Date, as the case may be, and addressed to the Underwriters, in form and substance reasonably satisfactory to the Representatives, to the effect set forth in Annex E hereto.

(h) *Opinion and 10b-5 Statement of Counsel for the Underwriters.* The Representatives shall have received on and as of the Closing Date or the Additional Closing Date, as the case may be, an opinion and 10b-5 statement, addressed to the Underwriters, of Cravath, Swaine & Moore LLP, counsel for the Underwriters, with respect to such matters as the Representatives may reasonably request, and such counsel shall have received such documents and information as they may reasonably request to enable them to pass upon such matters.

(i) *No Legal Impediment to Issuance and Sale.* No action shall have been taken and no statute, rule, regulation or order shall have been enacted, adopted or issued by any federal, state or foreign governmental or regulatory authority that would, as of the Closing Date or the Additional Closing Date, as the case may be, prevent the issuance or sale of the Shares; and no injunction or order of any federal, state or foreign court shall have been issued that would, as of the Closing Date or the Additional Closing Date, as the case may be, prevent the issuance or sale of the Shares.

(j) *Good Standing*. The Representatives shall have received on and as of the Closing Date or the Additional Closing Date, as the case may be, satisfactory evidence of the good standing of the Company and its subsidiaries in their respective jurisdictions of organization and their good standing in such other jurisdictions as the Representatives may reasonably request, in each case in writing or any standard form of telecommunication from the appropriate governmental authorities of such jurisdictions.

(k) *Exchange Listing.* The Shares to be delivered on the Closing Date or the Additional Closing Date, as the case may be, shall have been approved for listing on the Nasdaq Market, subject to official notice of issuance.

(l) *Lock-up Agreements*. The "lock-up" agreements, each substantially in the form of Exhibit D hereto, between you and certain shareholders, officers and directors of the Company relating to sales and certain other dispositions of shares of Stock or certain other securities, delivered to you on or before the date hereof, shall be full force and effect on the Closing Date or the Additional Closing Date, as the case may be.

(m) *Additional Documents.* On or prior to the Closing Date or the Additional Closing Date, as the case may be, the Company shall have furnished to the Representatives such further certificates and documents as the Representatives may reasonably request.

All opinions, letters, certificates and evidence mentioned above or elsewhere in this Agreement shall be deemed to be in compliance with the provisions hereof only if they are in form and substance reasonably satisfactory to counsel for the Underwriters.

7. Indemnification and Contribution.

(a) *Indemnification of the Underwriters.* The Company agrees to indemnify and hold harmless each Underwriter, its affiliates, directors and officers and each person, if any, who controls such Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any and all losses, claims, damages and liabilities (including, without limitation, reasonable legal fees and other reasonable expenses incurred in connection with any suit, action or proceeding or any claim asserted, as such fees and expenses are incurred), joint or several, that arise out of, or are based upon, (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or caused by any omission or alleged omission to state therein a material fact required to be stated therein or necessary in order to make the statements therein, not misleading, or (ii) any untrue statement or alleged untrue statement of a material fact contained in the Prospectus (or any amendment or supplement thereto), any Preliminary Prospectus, any Issuer Free Writing Prospectus, any "issuer information" filed or required to be filed pursuant to Rule 433(d) under the Securities Act, any Written Testing-the-Waters Communication, any road show as defined in Rule 433(h) under the Securities Act (a "road show") or any Pricing Disclosure Package (including any Pricing Disclosure Package that has subsequently been amended), or caused by any omission or alleged omission to state therein a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading, in each case except insofar as such losses, claims, damages or liabilities arise out of, or are based upon, any untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with any information relating to any Underwriter furnished to the

Company in writing by such Underwriter through the Representatives expressly for use therein, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in subsection (b) below.

(b) *Indemnification of the Company.* Each Underwriter agrees, severally and not jointly, to indemnify and hold harmless the Company, its directors, its officers who signed the Registration Statement and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act to the same extent as the indemnity set forth in paragraph (a) above, but only with respect to any losses, claims, damages or liabilities that arise out of, or are based upon, any untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with any information relating to such Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in the Registration Statement, the Prospectus (or any amendment or supplement thereto), any Issuer Free Writing Prospectus, any Written Testing-the-Waters Communication, any road show or any Pricing Disclosure Package (including any Pricing Disclosure Package that has subsequently been amended), it being understood and agreed upon that the only such information furnished by any Underwriter consists of the following information in the Prospectus furnished on behalf of each Underwriter: the concession and reallowance figures appearing in the third paragraph under the caption "Underwriting" and the information contained in the thirteenth and fourteenth paragraphs relating to stabilizing transactions under the caption "Underwriting."

(c) *Notice and Procedures.* If any suit, action, proceeding (including any governmental or regulatory investigation), claim or demand shall be brought or asserted against any person in respect of which indemnification may be sought pursuant to the preceding paragraphs of this Section 7, such person (the "Indemnified Person") shall promptly notify the person against whom such indemnification may be sought (the "Indemnifying Person") in writing; provided that the failure to notify the Indemnifying Person shall not relieve it from any liability that it may have under the preceding paragraphs of this Section 7 except to the extent that it has been materially prejudiced (through the forfeiture of substantive rights or defenses) by such failure; and provided, further, that the failure to notify the Indemnifying Person shall not relieve it from any liability that it may have to an Indemnified Person otherwise than under the preceding paragraphs of this Section 7. If any such proceeding shall be brought or asserted against an Indemnified Person and it shall have notified the Indemnifying Person thereof, the Indemnifying Person shall retain counsel reasonably satisfactory to the Indemnified Person (who shall not, without the consent of the Indemnified Person, be counsel to the Indemnifying Person) to represent the Indemnified Person and any others entitled to indemnification pursuant to this Section that the Indemnifying Person may designate in such proceeding and shall pay the reasonable documented fees and expenses in such proceeding and shall pay the reasonable documented fees and expenses of such counsel

related to such proceeding, as incurred. In any such proceeding, any Indemnified Person shall have the right to retain its own counsel, but the fees and expenses of such counsel shall be at the expense of such Indemnified Person unless (i) the Indemnifying Person and the Indemnified Person shall have mutually agreed to the contrary; (ii) the Indemnifying Person has failed within a reasonable time to retain counsel reasonably satisfactory to the Indemnified Person; (iii) the Indemnified Person shall have reasonably concluded that there may be legal defenses available to it that are different from or in addition to those available to the Indemnifying Person; or (iv) the named parties in any such proceeding (including any impleaded parties) include both the Indemnifying Person and the Indemnified Person and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them. It is understood and agreed that the Indemnifying Person shall not, in connection with any proceeding or related proceeding in the same jurisdiction, be liable for the fees and expenses of more than one separate firm (in addition to any local counsel) for all Indemnified Persons, and that all such fees and expenses shall be paid or reimbursed as they are incurred. Any such separate firm for any Underwriter, its affiliates, directors and officers and any control persons of such Underwriter shall be designated in writing by J.P. Morgan Securities LLC and any such separate firm for the Company, its directors, its officers who signed the Registration Statement and any control persons of the Company shall be designated in writing by the Company. The Indemnifying Person shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent, the Indemnifying Person agrees to indemnify each Indemnified Person from and against any loss or liability by reason of such settlement. Notwithstanding the foregoing sentence, if at any time an Indemnified Person shall have requested that an Indemnifying Person reimburse the Indemnified Person for fees and expenses of counsel as contemplated by this paragraph, the Indemnifying Person shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 30 days after receipt by the Indemnifying Person of such request and (ii) the Indemnifying Person shall not have reimbursed the Indemnified Person in accordance with such request prior to the date of such settlement. No Indemnifying Person shall, without the written consent of the Indemnified Person, effect any settlement of any pending or threatened proceeding in respect of which any Indemnified Person is or could have been a party and indemnification could have been sought hereunder by such Indemnified Person, unless such settlement (x) includes an unconditional release of such Indemnified Person, in form and substance reasonably satisfactory to such Indemnified Person, from all liability on claims that are the subject matter of such proceeding and (y) does not include any statement as to or any admission of fault, culpability or a failure to act by or on behalf of any Indemnified Person.

(d) *Contribution.* If the indemnification provided for in paragraphs (a) and (b) above is unavailable to an Indemnified Person or insufficient in respect of any losses, claims, damages or liabilities referred to therein, then each Indemnifying Person under

such paragraph, in lieu of indemnifying such Indemnified Person thereunder, shall contribute to the amount paid or payable by such Indemnified Person as a result of such losses, claims, damages or liabilities (i) in such proportion as is appropriate to reflect the relative benefits received by the Company, on the one hand, and the Underwriters on the other, from the offering of the Shares or (ii) if the allocation provided by clause (i) is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) but also the relative fault of the Company, on the one hand, and the Underwriters on the other, in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the Company, on the one hand, and the Underwriters on the other, shall be deemed to be in the same respective proportions as the net proceeds (after deducting underwriting discounts but before deducting expenses) received by the Company from the sale of the Shares and the total underwriting discounts and commissions received by the Underwriters in connection therewith, in each case as set forth in the table on the cover of the Prospectus, bear to the aggregate offering price of the Shares. The relative fault of the Company, on the one hand, and the Underwriters on the other, shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or by the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

(e) *Limitation on Liability.* The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to paragraph (d) above were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation that does not take account of the equitable considerations referred to in paragraph (d) above. The amount paid or payable by an Indemnified Person as a result of the losses, claims, damages and liabilities referred to in paragraph (d) above shall be deemed to include, subject to the limitations set forth above, any reasonable documented legal or other reasonable documented expenses incurred by such Indemnified Person in connection with any such action or claim. Notwithstanding the provisions of paragraphs (d) and (e), in no event shall an Underwriter be required to contribute any amount in excess of the amount by which the total underwriting discounts and commissions received by such Underwriter with respect to the offering of the Shares exceeds the amount of any damages that such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations to contribute pursuant to paragraphs (d) and (e) are several in proportion to their respective purchase obligations hereunder and not joint.

(f) *Non-Exclusive Remedies.* The remedies provided for in paragraphs (a) through (e) are not exclusive and shall not limit any rights or remedies which may otherwise be available to any Indemnified Person at law or in equity.

8. Effectiveness of Agreement. This Agreement shall become effective upon the execution and delivery hereof by the parties hereto.

9. Termination. This Agreement may be terminated in the absolute discretion of the Representatives, by notice to the Company, if after the execution and delivery of this Agreement and on or prior to the Closing Date or, in the case of the Option Shares, prior to the Additional Closing Date (i) trading generally shall have been suspended or materially limited on or by either of the New York Stock Exchange or The Nasdaq Market; (ii) trading of any securities issued or guaranteed by the Company shall have been suspended on any exchange or in any over-the-counter market; (iii) a general moratorium on commercial banking activities shall have been declared by federal or New York State authorities; or (iv) there shall have occurred any outbreak or escalation of hostilities or any change in financial markets or any calamity or crisis, either within or outside the United States, that, in the judgment of the Representatives, is material and adverse and makes it impracticable or inadvisable to proceed with the offering, sale or delivery of the Shares on the Closing Date or the Additional Closing Date, as the case may be, on the terms and in the manner contemplated by this Agreement, the Pricing Disclosure Package and the Prospectus.

10. Defaulting Underwriter.

(a) If, on the Closing Date or the Additional Closing Date, as the case may be, any Underwriter defaults on its obligation to purchase the Shares that it has agreed to purchase hereunder on such date, the non-defaulting Underwriters may in their discretion arrange for the purchase of such Shares by other persons satisfactory to the Company on the terms contained in this Agreement. If, within 36 hours after any such default by any Underwriter, the non-defaulting Underwriters do not arrange for the purchase of such Shares, then the Company shall be entitled to a further period of 36 hours within which to procure other persons satisfactory to the non-defaulting Underwriters to purchase such Shares on such terms. If other persons become obligated or agree to purchase the Shares of a defaulting Underwriter, either the non-defaulting Underwriters or the Company may postpone the Closing Date or the Additional Closing Date, as the case may be, for up to five full business days in order to effect any changes that in the opinion of counsel for the Company or counsel for the Underwriters may be necessary in the Registration Statement and the Prospectus or in any other document or arrangement, and the Company agrees to promptly prepare any amendment or supplement to the Registration Statement and the Prospectus that effects any such changes. As used in this Agreement, the term "Underwriter" includes, for all purposes of this Agreement unless the context otherwise requires, any person not listed in Schedule 1 hereto that, pursuant to this Section 10, purchases Shares that a defaulting Underwriter agreed but failed to purchase.

(b) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by the non-defaulting Underwriters and the Company as provided in paragraph (a) above, the aggregate number of Shares that remain unpurchased on the Closing Date or the Additional Closing Date, as the case may be, does not exceed one-eleventh of the aggregate number of Shares to be purchased

on such date, then the Company shall have the right to require each non-defaulting Underwriter to purchase the number of Shares that such Underwriter agreed to purchase hereunder on such date plus such Underwriter's pro rata share (based on the number of Shares that such Underwriter agreed to purchase on such date) of the Shares of such defaulting Underwriter or Underwriters for which such arrangements have not been made.

(c) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by the non-defaulting Underwriters and the Company as provided in paragraph (a) above, the aggregate number of Shares that remain unpurchased on the Closing Date or the Additional Closing Date, as the case may be, exceeds one-eleventh of the aggregate amount of Shares to be purchased on such date, or if the Company shall not exercise the right described in paragraph (b) above, then this Agreement or, with respect to any Additional Closing Date, the obligation of the Underwriters to purchase Shares on the Additional Closing Date, as the case may be, shall terminate without liability on the part of the non-defaulting Underwriters. Any termination of this Agreement pursuant to this Section 10 shall be without liability on the part of the Company, except that the Company will continue to be liable for the payment of expenses as set forth in Section 11 hereof and except that the provisions of Section 7 hereof shall not terminate and shall remain in effect.

(d) Nothing contained herein shall relieve a defaulting Underwriter of any liability it may have to the Company or any non-defaulting Underwriter for damages caused by its default.

11. Payment of Expenses.

(a) Whether or not the transactions contemplated by this Agreement are consummated or this Agreement is terminated, the Company will pay or cause to be paid all costs and expenses incident to the performance of its obligations hereunder, including without limitation, (i) the costs incident to the authorization, issuance, sale, preparation and delivery of the Shares and any taxes payable in that connection; (ii) the costs incident to the preparation, printing and filing under the Securities Act of the Registration Statement, the Preliminary Prospectus, any Issuer Free Writing Prospectus, any Pricing Disclosure Package and the Prospectus (including all exhibits, amendments and supplements thereto) and the distribution thereof; (iii) the fees and expenses of the Company's counsel and independent accountants; (iv) the fees and expenses incurred in connection with the registration or qualification and determination of eligibility for investment of the Shares under the laws of such jurisdictions as the Representatives may designate and the

preparation, printing and distribution of a Blue Sky Memorandum (including the related reasonable fees and expenses of counsel for the Underwriters), provided that the amount payable by the Company pursuant to clause (iv) shall not exceed $10,000; (v) the cost of preparing stock certificates; (vi) the costs and charges of any transfer agent and any registrar; (vii) all expenses and application fees incurred in connection with any filing with, and clearance of the offering by, FINRA, provided that the amount payable the Company pursuant to clause (vii) shall not exceed $45,000; (viii) all expenses incurred by the Company in connection with any "road show" presentation to potential investors; provided, however, that the Underwriters will pay all of the travel, lodging and other expenses of the Underwriters or any of their employees incurred by them in connection with the "road show", and provided, further, that the Company will pay all of the cost of any aircraft chartered in connection with such road show with the prior approval of the Company; and (ix) all expenses and application fees related to the listing of the Shares on the Nasdaq Market.

(b) If (i) this Agreement is terminated pursuant to Section 9, (ii) the Company for any reason fails to tender the Shares for delivery to the Underwriters (other than by reason of a default by any Underwriter) or (iii) the Underwriters decline to purchase the Shares for any reason permitted under this Agreement, the Company agrees to reimburse the Underwriters for all out-of-pocket costs and expenses (including the fees and expenses of their counsel) reasonably incurred by the Underwriters in connection with this Agreement and the offering contemplated hereby. For the avoidance of doubt, it is understood that the Company shall not pay or reimburse any costs, fees or expenses incurred by an Underwriter that defaults on its obligations to purchase the Shares.

12. Persons Entitled to Benefit of Agreement. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and the officers and directors and any controlling persons referred to herein, and the affiliates of each Underwriter referred to in Section 7 hereof. Nothing in this Agreement is intended or shall be construed to give any other person any legal or equitable right, remedy or claim under or in respect of this Agreement or any provision contained herein. No purchaser of Shares from any Underwriter shall be deemed to be a successor merely by reason of such purchase.

13. Survival. The respective indemnities, rights of contribution, representations, warranties and agreements of the Company and the Underwriters contained in this Agreement or made by or on behalf of the Company or the Underwriters pursuant to this Agreement or any certificate delivered pursuant hereto shall survive the delivery of and payment for the Shares and shall remain in full force and effect, regardless of any termination of this Agreement or any investigation made by or on behalf of the Company or the Underwriters or the directors, officers, controlling persons or affiliates referred to in Section 7 hereof.

14. Certain Defined Terms. For purposes of this Agreement, (a) except where otherwise expressly provided, the term "affiliate" has the meaning set forth in Rule 405 under the Securities Act; (b) the term "business day" means any day other than a day on which banks are

permitted or required to be closed in New York City; and (c) the term "subsidiary" has the meaning set forth in Rule 405 under the Securities Act.

15. Compliance with USA Patriot Act. In accordance with the requirements of the USA Patriot Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)), the Underwriters are required to obtain, verify and record information that identifies their respective clients, including the Company, which information may include the name and address of their respective clients, as well as other information that will allow the Underwriters to properly identify their respective clients.

16. Miscellaneous.

(a) *Notices.* All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given if mailed or transmitted and confirmed by any standard form of telecommunication. Notices to the Underwriters shall be given to the Representatives c/o J.P. Morgan Securities LLC, 383 Madison Avenue, New York, New York 10179 (fax: (212) 622-8358); Attention: Equity Syndicate Desk; and c/o Leerink Partners LLC, One Federal Street, 37th Floor, Boston, Massachusetts 02110. Notices to the Company shall be given to it at 18 Commerce Way, Woburn, Massachusetts, (fax: (781) 926-0870); Attention: Philip Astley-Sparke.

(b) *Governing Law.* This Agreement and any claim, controversy or dispute arising under or related to this Agreement shall be governed by and construed in accordance with the laws of the State of New York.

(c) *Waiver of Jury Trial.* Each of the parties hereto hereby waives any right to trial by jury in any suit or proceeding arising out of or relating to this Agreement.

(d) *Counterparts.* This Agreement may be signed in counterparts (which may include counterparts delivered by any standard form of telecommunication), each of which shall be an original and all of which together shall constitute one and the same instrument.

(e) *Amendments or Waivers.* No amendment or waiver of any provision of this Agreement, nor any consent or approval to any departure therefrom, shall in any event be effective unless the same shall be in writing and signed by the parties hereto.

(f) *Headings.* The headings herein are included for convenience of reference only and are not intended to be part of, or to affect the meaning or interpretation of, this Agreement.

If the foregoing is in accordance with your understanding, please indicate your acceptance of this Agreement by signing in the space provided below.

Very truly yours,

REPLIMUNE GROUP, INC.

By: _____
Name:
Title:

Accepted: As of the date first written above

J.P. MORGAN SECURITIES LLC
LEERINK PARTNERS LLC

For themselves and on behalf of the
several Underwriters listed
in Schedule 1 hereto.

J.P. MORGAN SECURITIES LLC

By: _____
Name:
Title:

LEERINK PARTNERS LLC

By: _____
Name:
Title:

Schedule 1

Underwriters	Number of Shares
J.P. Morgan Securities LLC	
Leerink Partners LLC	
BMO Capital Markets Corp.	
Total	

Annex A

a. Pricing Disclosure Package
[·]

b. Pricing Information Provided Orally by Underwriters

Number of Shares:	[·] Underwritten Shares plus [·] Option Shares
Public Offering Price:	$[·] per Share

Annex B

Written Testing-the-Waters Communications

Investor Presentation dated [·], 2018

[·]

Annex C

Replimune Group, Inc.

Pricing Term Sheet

[To come, to the extent needed]

Annex D

[Form of Opinion of Counsel for the Company]

Annex E

[Form of Opinion of Intellectual Property Counsel for the Company]

Exhibit A

Testing-the-Waters Authorization

(to be delivered by the Company to J.P. Morgan Securities LLC and Leerink Partners LLC in email or letter form in accordance with Section 3(e))

In reliance on Section 5(d) of the Securities Act of 1933, as amended (the "Act"), Replimune Group, Inc. (the "Issuer") hereby authorizes J.P. Morgan Securities LLC ("J.P. Morgan") and Leerink Partners LLC ("Leerink") (collectively, the "Representatives") and their affiliates and their respective employees, to engage on behalf of the Issuer in oral and written communications with potential investors that are "qualified institutional buyers", as defined in Rule 144A under the Act, or institutions that are "accredited investors", as defined in Regulation D under the Act, to determine whether such investors might have an interest in the Issuer's contemplated initial public offering ("Testing-the-Waters Communications"). A "Written Testing-the Waters Communication" means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Act.

The Issuer represents that it is an "emerging growth company" as defined in Section 2(a)(19) of the Act ("Emerging Growth Company") and agrees to promptly notify J.P. Morgan and Leerink in writing if the Issuer hereafter ceases to be an Emerging Growth Company while this authorization is in effect. If at any time following the distribution of any Written Testing-the-Waters Communication there occurs an event or development as a result of which such Written Testing-the-Waters Communication included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Issuer will promptly notify J.P. Morgan and Leerink and will promptly amend or supplement, at its own expense, such Written Testing-the-Waters Communication to eliminate or correct such untrue statement or omission.

Nothing in this authorization is intended to limit or otherwise affect the ability of J.P. Morgan and Leerink and their affiliates and their respective employees, to engage in communications in which they could otherwise lawfully engage in the absence of this authorization, including, without limitation, any written

communication containing only one or more of the statements specified under Rule 134(a) under the Act. This authorization shall remain in effect until the Issuer has provided to J.P. Morgan and Leerink a written notice revoking this authorization. All notices as described herein shall be sent by email to the attention of David Ke at david.ke@jpmorgan.com and Rahul Chaudhary at rahul.chaudhary@leerink.com, with copies to William Fogg at wfogg@cravath.com and Johnny Skumpija at jskumpija@cravath.com.

Exhibit B

[Form of Waiver of Lock-up]

Replimune Group, Inc.

Public Offering of Common Stock

, 20[·]

[Name and Address of
Officer or Director
Requesting Waiver]

Dear Mr./Ms. [Name]:

This letter is being delivered to you in connection with the offering by Replimune Group, Inc. (the "Company") of [·] shares of common stock, $0.001 par value (the "Common Stock"), of the Company and the lock-up letter dated [·], 2018 (the "Lock-up Letter"), executed by you in connection with such offering, and your request for a [waiver] [release] dated [·], 2018, with respect to [·] shares of Common Stock (the "Shares").

[·] hereby agrees on behalf of the underwriters to [waive] [release] the transfer restrictions set forth in the Lock-up Letter, but only with respect to the Shares, effective [·], 20[·]; provided, however, that such [waiver] [release] is conditioned on the Company announcing the impending [waiver] [release] by press release through a major news service at least two business days before effectiveness of such [waiver] [release]. This letter will serve as notice to the Company of the impending [waiver] [release].

Except as expressly [waived] [released] hereby, the Lock-up Letter shall remain in full force and effect.

Yours very truly,

[·]

cc: Company

Exhibit C

[Form of Press Release]

Replimune Group, Inc.
[Date]

Replimune Group, Inc. ("Company") announced today that [·] are [waiving] [releasing] a lock-up restriction with respect to [·] shares of the Company's common stock held by [certain officers or directors] [an officer or director] of the Company. The [waiver] [release] will take effect on [·], 20[·], and the shares may be sold on or after such date.

This press release is not an offer for sale of the securities in the United States or in any other jurisdiction where such offer is prohibited, and such securities may not be offered or sold in the United States absent registration or an exemption from registration under the Securities Act of 1933, as amended.

Exhibit D

FORM OF LOCK-UP AGREEMENT

[·], 2018

J.P. MORGAN SECURITIES LLC
LEERINK PARTNERS LLC

As Representatives of
the several Underwriters listed in

Schedule 1 to the Underwriting
Agreement referred to below

c/o J.P. Morgan Securities LLC
383 Madison Avenue
New York, New York 10179

c/o Leerink Partners LLC
One Federal Street, 37th Floor
Boston, Massachusetts 02110

Re: Replimune Group, Inc. — Public Offering

Ladies and Gentlemen:

The undersigned understands that you, as Representatives (the "Representatives") of the several Underwriters, propose to enter into an underwriting agreement (the "Underwriting Agreement") with Replimune Group, Inc., a Delaware corporation (the "Company"), providing for the public offering (the "Public Offering") by the several Underwriters named in Schedule 1 to the Underwriting Agreement (the "Underwriters"), of common stock, $0.001 par value per share, of the Company (the "Securities"). Capitalized terms used herein and not otherwise defined shall have the meanings set forth in the Underwriting Agreement.

In consideration of the Underwriters' agreement to purchase and make the Public Offering of the Securities, and for other good and valuable consideration, receipt of which is hereby acknowledged, the undersigned hereby agrees that, without the prior written consent of the Representatives on behalf of the Underwriters, the undersigned will not, during the period beginning on the date of this letter agreement (this "Letter Agreement") and ending 180 days after the date of the final prospectus relating to the Public Offering (the "Prospectus") (such period, the "Restricted Period"), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of common stock, $0.001 par value per share, of the Company (the "Common Stock") or any securities convertible into or exercisable or exchangeable for Common Stock (including without limitation, Common

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Stock or such other securities which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations of the Securities and Exchange Commission (the "Commission") and securities which may be issued upon exercise of a stock option or warrant), or publicly disclose the intention to make any offer, sale, pledge or disposition, (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Common Stock or such other securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise or (3) make any demand for or exercise any right with respect to the registration of any shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock, in each case other than:

(A) transactions relating to shares of Common Stock or other securities that the undersigned may purchase in the Public Offering (provided that the undersigned is not an officer or director of the Company) or in open market transactions during the Restricted Period,

(B) the exercise, including by "net" exercise, of any options or warrants to acquire shares of Common Stock or the conversion of any convertible security into Common Stock described in the Prospectus, or issued pursuant to an equity plan described in the Prospectus, it being understood that any shares of Common Stock received by the undersigned upon such exercise or conversion shall be subject to the restrictions on transfers set forth in this Letter Agreement; provided that any filing required under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), shall clearly indicate in the codes and footnotes thereto that any disposition of shares in connection with a "net" exercise was made solely to the Company,

(C) the sale or transfer to the Company of such number of shares of Common Stock acquired by the undersigned in connection with the exercise of such options or warrants on a "net" exercise basis described in the foregoing clause; provided that any filing required under the Exchange Act shall clearly indicate in the codes and footnotes thereto that such sale or transfer, as applicable, is in connection with a "net" exercise was made solely to the Company,

(D) the sale or transfer to the Company of such number of shares of Common Stock necessary to generate only such amount of cash needed for the payment of taxes (including estimated taxes) due as a result of the exercise of such options or warrants described in clause (C); provided that any filing required under the Exchange Act shall clearly indicate in the codes and footnotes thereto that such sale or transfer, as applicable, is for the purpose of satisfying tax obligations,

(E) transfers of shares of Common Stock or such other securities as a bona fide gift or gifts (including without limitation to a charitable organization) or pursuant to a negotiated divorce settlement,

(F) transfers by operation of law, including pursuant to a qualified domestic relations order,

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(G) distributions or transfers of shares of Common Stock or other securities to subsidiaries, limited or general partners, members, managers, managing members, officers, directors, employees, stockholders or affiliates (as such term is defined in Rule 405 as promulgated by the Commission under the Securities Act of 1933, as amended) of, or any investment fund or other entity that controls or manages, the undersigned or the undersigned's affiliates (as defined above) or to any investment fund or other entity controlled or managed by the undersigned or under common control of the undersigned, or if the undersigned is an investment company registered under the Investment Company Act of 1940, as amended (a "Mutual Fund"), pursuant to a merger or reorganization with or into another Mutual Fund that shares the same investment adviser registered pursuant to the requirements of the Investment Advisers Act of 1940, as amended,

(H) transfers of shares of Common Stock or other securities to any immediate family member, trusts for the direct or indirect benefit of the undersigned or one or more of the immediate family members of the undersigned or any of their successors upon death, or any partnerships or limited liability company, the partners or members of which consist of or are for the direct or indirect benefit of the undersigned and/or immediate family members or other

dependent of the undersigned (for purposes of this Letter Agreement, "immediate family" means any relationship by blood, marriage or adoption, not more remote than first cousin),

(I) if the undersigned is a trust, transfers to a trustor or beneficiary of the trust,

(J) transfers or dispositions of shares of Common Stock or such other securities by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the undersigned in a transaction not involving a disposition for value, and

(K) conversion of preferred stock into shares of Common Stock in connection with the consummation of the Public Offering, it being understood that any such shares of Common Stock received by the undersigned upon such conversion shall be subject to the restrictions on transfer set forth in this Letter Agreement,

provided that in the case of any transfer or distribution pursuant to clause (E), (G), (H), (I) or (J), each donee or distributee shall execute and deliver to the Representatives a lock-up letter in the form of this Letter Agreement; and provided, further, that in the case of any transfer or distribution pursuant to clauses (A), (E) and (G) through (I), no filing by any party (donor, donee, transferor or transferee) under the Exchange Act or other public announcement reporting a reduction in the beneficial ownership shall be required or shall be made voluntarily in connection with such transfer or distribution (other than a filing on a Form 5, Schedule 13G (or 13G/A) or 13F made after the expiration of the Restricted Period referred to above). If the undersigned is an officer or director of the Company, the undersigned further agrees that the foregoing provisions shall be equally applicable to any Company-directed Securities the undersigned may purchase in the Public Offering.

In addition, the foregoing paragraph shall not apply to the establishment of a trading plan by the undersigned pursuant to Rule 10b5-1 under the Exchange Act for the sale or transfer of shares of Common Stock; provided that such plan does not provide for the sale or transfer of Common Stock during the Restricted Period and, no public announcement or filing under the Exchange Act, if any, is required of or is voluntarily made by or on behalf of the undersigned or the Company regarding such plan.

The restrictions contained herein shall not apply to any transfers, sales, tenders or other dispositions of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock pursuant to a bona fide third-party tender offer, merger, amalgamation, consolidation or other similar transaction that is approved by the Company's board of directors and made to or involving all holders of the Common Stock or such other securities pursuant to a change of control of the ownership of the Company (including, without limitation, the entry into any lock-up, voting or similar agreement pursuant to which the undersigned may agree to transfer, sell, tender or otherwise dispose of Common Stock or other such securities in connection with any such transaction, or vote any securities in favor of any such transaction); provided that if such bona fide third-party tender offer, merger, amalgamation, consolidation or other similar transaction is not completed, any Common Stock or any security convertible into or exercisable or exchangeable for Common Stock subject to this Letter Agreement shall remain subject to the restrictions contained in this Letter Agreement. For purposes of this Letter Agreement, "change of control" shall mean the consummation of any bona fide third-party tender offer, merger, amalgamation, consolidation or other similar transaction the result of which is that any "person" (as defined in Section 13(d)(3) of the Exchange Act), or group of persons, other than the Company, becomes the beneficial owner (as defined in Rules 13d-3 and 13d-5 of the Exchange Act) of 50% of total voting power of the voting stock of the Company.

If any percentage of the Common Stock or any security convertible into or exercisable or exchangeable for Common Stock held by any person or entity other than the undersigned that is subject to a lock-up agreement related to the Public Offering similar in form to this Letter Agreement is released from any restrictions set forth in such lock-up agreement, the same percentage (relative to the total holdings of the stockholder being released from such restrictions) of the Common Stock or any security convertible into or exercisable or exchangeable for Common Stock held by the undersigned shall be immediately and fully released from any remaining restrictions on transfer set forth in this Letter Agreement concurrently therewith; provided, however, that the Representatives will not be obligated to release the undersigned from the restrictions on transfer set forth in this Letter Agreement unless and until the Representatives have first released more than 1%, in the aggregate, of the Company's total outstanding shares of Common Stock (calculated on an as-converted basis pre-Public Offering) from such restrictions; provided that directors and officers may be released from such restrictions solely due to financial hardship as determined by the Representatives in their sole judgment. In the event that, as a result of this paragraph, the undersigned is released from any of its obligations under this Letter Agreement or, by virtue of this Letter Agreement, becomes entitled to offer, pledge, sell, contract to sell, or otherwise transfer or dispose of any Common Stock or any security convertible into or exercisable or exchangeable for Common Stock prior to the date that is 180 days after the date of the Prospectus, the Representatives shall notify the Company within one (1) business day of the

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effective date of such release, and the Company, in turn, in consultation with the Representatives shall notify the undersigned within two (2) business days thereafter.

If the undersigned is an officer or director of the Company, (i) the Representatives on behalf of the Underwriters agree that, at least three business days before the effective date of any release or waiver of the foregoing restrictions in connection with a transfer of shares of Common Stock, the Representatives on behalf of the Underwriters will notify the Company of the impending release or waiver, and (ii) the Company has agreed in the Underwriting Agreement to announce the impending release or waiver by press release through a major news service at least two business days before the effective date of the release or waiver. Any release or waiver granted by the Representatives on behalf of the Underwriters hereunder to any such officer or director shall only be effective two business days after the publication date of such press release. The provisions of this paragraph will not apply if (a) the release or waiver is effected solely to permit a transfer not for consideration and (b) the transferee has agreed in writing to be bound by the same terms described in this Letter Agreement to the extent and for the duration that such terms remain in effect at the time of the transfer.

In furtherance of the foregoing, the Company, and any duly appointed transfer agent for the registration or transfer of the securities described herein, are hereby authorized to decline to make any transfer of securities if such transfer would constitute a violation or breach of this Letter Agreement.

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Letter Agreement. All authority herein conferred or agreed to be conferred and any obligations of the undersigned shall be binding upon the successors, assigns, heirs or personal representatives of the undersigned.

Notwithstanding anything to the contrary contained herein, if (1) the Company files an application with the Commission to withdraw the registration statement relating to the Public Offering, (2) the Underwriting Agreement does not become effective by December 31, 2018, or if the Underwriting Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to payment for and delivery of the Common Stock to be sold thereunder, (3) the Representatives, on behalf of the Underwriters, advise the Company, or the Company advises the Representatives, in writing, prior to the execution of the Underwriting Agreement, that they have determined not to proceed with the Public Offering or (4) the closing of the Public Offering shall not have occurred on or before December 31, 2018, then, in each case the undersigned shall be released from all obligations under this Letter Agreement. The undersigned understands that the Underwriters are entering into the Underwriting Agreement and proceeding with the Public Offering in reliance upon this Letter Agreement.

This Letter Agreement and any claim, controversy or dispute arising under or related to this Letter Agreement shall be governed by and construed in accordance with the laws of the State of New York.

Very truly yours,

[*NAME OF STOCKHOLDER*]

By: _____
Name:
Title:

Exhibit 3.1

SECOND AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
REPLIMUNE GROUP, INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

Replimune Group, Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "**General Corporation Law**"),

DOES HEREBY CERTIFY:

FIRST: That the name of this corporation is Replimune Group, Inc., and that this corporation was originally incorporated pursuant to the General Corporation Law on July 5, 2017 under the name Replimune Group, Inc.

SECOND: That the Board of Directors duly adopted resolutions proposing to further amend and restate the Certificate of Incorporation of this corporation, declaring said amendment and restatement to be advisable and in the best interests of this corporation and its stockholders, and authorizing the appropriate officers of this corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed amendment and restatement is as follows:

RESOLVED, that the Certificate of Incorporation of this corporation be amended and restated in its entirety as follows:

ARTICLE FIRST

The name of this corporation is Replimune Group, Inc. (the "**Corporation**").

ARTICLE SECOND

The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street, in the City of Wilmington, County of New Castle 19801. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE THIRD

The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

ARTICLE FOURTH

The Corporation is authorized to issue two classes of stock to be designated, respectively, common stock and preferred stock. The total number of shares of all classes of stock which the Corporation shall have authority to issue is twenty-nine million two hundred ninety thousand two hundred fifty-six (29,290,256). The total number of shares of common stock, $0.001 par value per share (the "**Common Stock**"), authorized to be issued is twenty-seven million three hundred fourteen thousand two hundred eighty-eight (27,314,288), of which twenty-six thousand two hundred fifty-eight (26,258) shares are designated as Common A Stock ("**Common A Stock**"). The total number of shares of preferred stock, $0.001 par value per share, (the "**Preferred Stock**") authorized to be issued is one million nine hundred seventy-five thousand nine hundred sixty-eight (1,975,968), of which (i) two hundred fifty thousand (250,000) shares are designated as Series Seed Preferred Stock (the "**Series Seed Preferred Stock**") (ii) eight hundred sixty-four thousand five hundred fifty-three (864,553) shares are designated Series A Preferred Stock (the "**Series A Preferred Stock**") and (iii) eight hundred sixty-one thousand four hundred fifteen (861,415) shares are designated as Series B Preferred Stock (the "**Series B Preferred Stock**"). Other than in respect of the specific rights and limitations of the Common A Stock shares set out in Article IV(A)(3) or unless expressly stated otherwise herein, for the purposes hereof, the Common Stock and Common A Stock are referred herein together as the "**Common Stock**".

At the time of the filing of this Second Certificate of Amendment to the Certificate of Incorporation with the Office of the Secretary of State of the State of Delaware (the "**Effective Time**"), a 1-for-9.94688 forward stock split of the issued and outstanding shares of Common Stock, other than the Common A Stock, shall become effective, whereby every one (1) share of Common Stock, other than the Common A Stock, issued and outstanding immediately prior to the Effective Time, automatically, and without any action on the part of the holder thereof, shall be reclassified and converted into 9.94688 shares of Common Stock (the "**Forward Stock Split**"). No fractional shares of Common Stock shall be issued or issuable in connection with the Forward Stock Split. All resulting shares of Common Stock shall be rounded down to the nearest whole share of Common Stock and, upon surrender after the Effective Time of a certificate or certificates which formerly represented shares of Common Stock that were issued and outstanding immediately prior to the Effective Time (the "**Prior Common Stock**"), any person who would otherwise be entitled to a fractional share of Common Stock as a result of the Forward Stock Split, following the Effective Time, shall be entitled to receive a cash payment equal to the fraction of which such holder would otherwise be entitled multiplied by the fair value per share as determined by the board of directors. Following the Forward Stock Split, (i) each certificate representing the shares of Prior Common Stock shall represent the number of shares of the Corporation's Common Stock into which the shares of Prior Common Stock previously represented by such stock certificate had been converted; and (ii) each person holding of record a certificate or certificates that represented shares of Prior Common Stock shall receive, upon surrender of such certificate or certificates, a new certificate or certificates evidencing and representing the number of shares of the Corporation's Common Stock to which such person was entitled as a result of the Forward Stock Split.

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation,

A. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of the Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings) The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of the Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

3. Dividend and Distribution Rights of Common A Stock. For purposes of Article IV(B)(1) , each share of the Common A Stock shall be entitled solely to a dividend equal to a maximum of 100% of the par value of each share of the Common A Stock. For purposes of Article IV(B)(2.1), each share of the Common A Stock shall be entitled solely to a distribution equal to a maximum of 300% of the par value of each share of the Common A Stock.

B. PREFERRED STOCK

The rights, preferences, privileges and restrictions granted to and imposed on the Preferred Stock are as set forth below in this Part B of this Article Fourth. Unless otherwise indicated, references to "sections" or "subsections" in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth.

1. Dividends.

(a) Subject to Article IV(A)(3), in respect of the Common A Stock, from and after the date of the issuance of any shares of Preferred Stock, dividends at the rate per annum of six percent (6%) of the Original Issue Price of each such share of Preferred Stock shall accrue on such shares of Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Preferred Stock ("**Adjustment Event**")) (the "**Accruing Dividends**"). Accruing Dividends shall accrue from day to day, whether or not declared, and shall be non-cumulative; provided, however, that except as set forth in the following sentence of this Section 1 or in Subsection 2.1, such Accruing Dividends shall be payable only when, as, and if declared by the Board of Directors and the Corporation shall be under no obligation to pay such Accruing Dividends. The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Certificate of Incorporation) the holders of the Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Preferred Stock in an amount at least equal to an amount per share of Preferred Stock equal to 6 percent of the Original Issue Price of such share of Preferred Stock. The "**Original Issue Price**" means $63.79 per share (subject to any Adjustment Event) in respect of the Series B Preferred Stock, $34.70 per share (subject to any Adjustment Event) in respect of the Series A Preferred Stock, and $10 per share (subject to any Adjustment Event) in respect of the Series Seed Preferred Stock.

(b) After payment of such dividends, any additional dividends or distributions shall be distributed among all holders of Common Stock and Preferred Stock in proportion to the number of shares of Common Stock that would be held by each such holder if all shares of Preferred Stock were converted to Common Stock at the then effective conversion rate.

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

2.1 On a Liquidity Event (as defined below), the proceeds or assets from such Liquidity Event (the "**Proceeds**") shall be applied:

2.1.1 first, in paying to the holders of Series B Preferred Stock, in priority to any payment to the holders of Series A Preferred Stock, Series Seed Preferred Stock and Common Stock (in respect of the Series A Preferred Stock, Series Seed Preferred

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Stock and Common Stock held by such holder), an amount per share of Series B Preferred Stock held by such stockholder equal to $63.79 per share (subject to any Adjustment Event) (the "**Series B Original Issue Price**") plus all dividends and or other sums payable in respect of that share of stock, together with all interest and other amounts payable on that share (the "**Series B Preference Amount**") (provided that if there are insufficient Proceeds to satisfy the full Series B Preference Amount, the entire Proceeds shall be distributed among the holders of Series B Preferred Stock in proportion to the full preferential amount that each such stockholder is otherwise entitled to receive under this Section 2.1.1);

2.1.2 second, upon completion of the distribution required by Section 2.1.1, in paying to any payment to the holders of Series A Preferred Stock, in priority to the holders of Series Seed Preferred Stock and Common Stock (in respect of the Series Seed Preferred Stock and Common Stock held by such holder), an amount per share of Series A Preferred Stock held by such stockholder equal to $34.70 per share (subject to any Adjustment Event) (the "**Series A Original Issue Price**") plus all dividends and or other sums payable in respect of that share of stock, together with all interest and other amounts payable on that share (the "**Series A Preference Amount**") (provided that if there are insufficient Proceeds to satisfy the full Series A Preference Amount, the entire Proceeds available to the holders of Series A Preferred Stock shall be distributed among the holders of Series A Preferred Stock in proportion to the full preferential amount that each such stockholder is otherwise entitled to receive under this Section 2.1.2);

2.1.3 third, upon completion of the distributions required by Section 2.1.1 and Section 2.1.2, in paying to any payment to the holders of Seed Preferred Stock, in priority to the holders of Common Stock (in respect of the Common Stock held by such holder), an amount per share of Series Seed Preferred Stock held by such stockholder equal to $10.00 per share (subject to any Adjustment Event) (the "**Series Seed Original Issue Price**") plus all dividends and or other sums payable in respect of that share of stock, together with all interest and other amounts payable on that share (the "**Seed Preference Amount**") (provided that if there are insufficient Proceeds to satisfy the full Seed Preference Amount, the entire Proceeds available to the

holders of Series Seed Preferred Stock shall be distributed among the holders of Series Seed Preferred Stock in proportion to the full preferential amount that each such stockholder is otherwise entitled to receive under this Section 2.1.3); and

2.1.4 fourth, upon completion of the distributions required by Section 2.1.1, Section 2.1.2 and Section 2.1.3, all of the remaining Proceeds shall be distributed to the holders of the Common Stock, the holders of Series B Preferred Stock and the holders of Series A Preferred Stock (assuming full conversion of all such Series A Preferred Stock and Series B Preferred Stock) until, with respect to the holders of Series B Preferred Stock and Series A Preferred Stock, such holders shall have received the applicable Participation Cap (as defined below; thereafter, if Proceeds remain, the holders of Common Stock shall receive all of the remaining Proceeds pro rata based on the number of shares of Common Stock held by each. For purposes of this Certificate of Incorporation, "**Participation Cap**" shall mean $127.58 for the Series B Preferred Stock and $69.40 for the Series A Preferred Stock (each subject to any Adjustment Event), which includes amounts paid pursuant to Sections 2.1.1. and 2.2.2., respectively; and

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2.2 Notwithstanding the foregoing provisions of Section 2.1, if on a Liquidity Event the holders of Preferred Stock would have received more than they are entitled to receive under this Section 2 in respect of their Preferred Stock had the Series Seed Preferred Stock, the Series A Preferred Stock and/or the Series B Preferred Stock, as applicable, been converted into shares of Common Stock (but not Common A Stock) immediately prior to such Liquidity Event, then the holders of Preferred Stock shall receive such higher amount in lieu of the amount payable under Section 2.1.

2.3 In the event that any of the consideration payable upon a Liquidity Event is subject to escrow or other contingencies, then any proceeds available for distribution at the closing of such Liquidity Event (the "**Initial Consideration**") shall be distributed in accordance with the liquidation preferences set forth in Section 2.1 as if the Initial Consideration were the only consideration payable upon such Liquidity Event, and any other consideration that is subsequently released from escrow or other contingencies shall be distributed in accordance with Section 2.1 after taking into account the previous payment of the Initial Consideration as part of the same transaction.

2.4 "**Liquidity Event**" means:

2.4.1 any merger, consolidation or acquisition, involving the Corporation or any of its subsidiaries, in which the Corporation or its subsidiaries is not the surviving entity (except a merger or consolidation in which the holders of the capital stock of the Corporation immediately prior to such merger or consolidation continue to hold at least fifty percent (50%) of the voting power of the capital stock of the Corporation or the surviving or acquiring entity);

2.4.2 the disposal or lease by the Corporation of all or substantially all of its assets or the grant of an exclusive license or lease over all or substantially all of the Intellectual Property of the Corporation (an "**Asset Sale**");

2.4.3 the sale of (or the grant of a right to acquire or to dispose of) any of the shares in the capital of the Corporation (in one transaction or as a series of transactions) which will result in the purchaser (including, for the avoidance of doubt, any affiliates, entities controlled by or under common control with such purchaser) of those shares (or grantee of that right) acquiring an interest in shares giving to the holder or holders control of the Corporation, except where the sale is a sale of the entire issued capital stock of the Corporation to a newly formed holding company, pursuant to which the membership, pro rata stockholdings and classes of stock comprised in such holding company matches that of the Corporation immediately following the transfer of the issued capital stock of the Corporation to such holding company (a "**Share Sale**");

2.4.4 the occurrence of an event (including a merger or consolidation) where a person who did not previously exercise control over an entity acquires or otherwise becomes able to exercise such control, or where a person who was previously able to exercise control over that entity ceases to be in a position to do so (a "**Change of Control**") in respect of the Corporation;

2.4.5 the passing of any resolution for the liquidation, bankruptcy or winding up of the Corporation or any other return of capital or distribution of assets (on liquidation, capital reduction or otherwise but excluding a conversion, redemption or repurchase by the Corporation of shares made in accordance with this Certificate of Incorporation) (a "**Winding Up**");

2.4.6 any other a return of capital to stockholders (other than a conversion, redemption or repurchase of shares made in accordance with this Certificate of Incorporation).

2.4.7 "**Intellectual Property**" means copyrights, trade and service marks, trade names, rights in logos and get-up, inventions, confidential information, trade secrets and know-how, registered designs, design rights, patents, utility models, semi-conductor topographies, all rights of whatsoever nature in computer software and data, all rights of privacy and all intangible rights and privileges of a nature similar or allied to any of the foregoing, in every case in any part of the world and whether or not registered; and including all granted registrations and all applications for registration in respect of any of the same;

2.5 Exit Provisions.

2.5.1 On a Share Sale, the consideration payable (including any contingent or deferred consideration) whether in cash or otherwise to those stockholders selling shares of stock under a Share Sale (the "**Proceeds of Sale**") shall be distributed among the stockholders selling shares in the Share Sale in the manner and order of priority set out in Section 2.1 and the Corporation shall not register any transfer of shares if the Proceeds of Sale are not so distributed, provided that if the Proceeds of Sale are not settled in their entirety upon completion of the Share Sale:

(a) the Corporation shall not be prohibited from registering the transfer of the relevant Shares so long as the Proceeds of Sale that are settled have been distributed in accordance with this Section 2.5; and

(b) the stockholders shall take any action reasonably required by the holders of at least 75% of the shares of Preferred Stock (voting together as a single class, on an as-converted basis and not as separate series) (the "**Investor Majority**") to ensure that the Proceeds of Sale in their entirety are distributed among the stockholders in accordance with this Section 2.5, provided, however, that the approval of the holders of at

least 55% of the Series B Preferred Stock shall be required for any requested action that results in the holders of Series B Preferred Stock receiving less than their full liquidation preference under Section 2.1.1 (the "**Series B Approval**").

2.5.2 On an Asset Sale, the surplus assets of the Corporation remaining after payment of its liabilities shall be distributed (to the extent that the Corporation is lawfully permitted to do so) in the order of priority set out in Section 2.1 within ninety (90) days after the closing of the Asset Sale, unless otherwise agreed to by the Investor Majority and the Series B Approval (if applicable).

2.5.3 On an Asset Sale, if the Corporation does not effect a dissolution of the Corporation under the General Corporation Law within ninety (90) days after such Liquidity Event, then (i) the Corporation shall send a written notice to each holder of Preferred Stock no later than the ninetieth (90th) day after the Liquidity Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause; (ii) to require the redemption of such shares of Preferred Stock, and (iii) if the holders of at least 75% of the then outstanding shares of Series B Preferred Stock so request in a written instrument delivered to the Corporation not later than one hundred twenty (120) days after such Liquidity Event, the Corporation shall use the consideration received by the Corporation for such Liquidity Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of the Corporation), together with any other assets of the Corporation available for distribution to its stockholders, all to the extent permitted by Delaware law governing distributions to stockholders (the "**Available Proceeds**"), on the one hundred fiftieth (150th) day after such Liquidity Event, to redeem all outstanding shares of Preferred Stock at a price per share equal to the amount due to such holders of Preferred Stock as set forth in Section 2.1 hereof. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of Preferred Stock pursuant to the liquidation preferences under Section 2.1, the Corporation shall ratably redeem each holder's shares of Preferred Stock to the fullest extent of such Available Proceeds, and shall redeem the remaining shares as soon as it may lawfully do so under Delaware law governing distributions to stockholders.

3. Voting.

3.1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of the Certificate of Incorporation, holders of Preferred Stock shall vote together with the holders of Common Stock as a single class.

3.2 Election of Directors. The Board shall consist of no more than ten (10) directors. The holders of a majority of the outstanding shares of Common Stock (the "**Common Majority**") shall be entitled to elect two (2) directors of the Corporation (the "**Common Stockholder Directors**"). The holders of the majority of the outstanding shares of Series Seed Preferred Stock shall be entitled to elect two (2) directors of the Corporation (the "**Series Seed Directors**"). The holders of the majority of the outstanding shares of Series A Preferred Stock shall be entitled to elect one (1) director of the Corporation (the "**Series A Director**"). The holders of at least 55% of the outstanding shares of Series B Preferred Stock shall be entitled to elect two (2) directors of the Corporation (the "**Series B Directors**" and together with Series A Director and Series Seed Directors, the "**Investor Directors**"). The holders of the majority of the outstanding shares of capital stock of the Corporation, voting together as a single class on an as converted basis, shall be entitled to elect three (3) directors of the Corporation.

3.3 Preferred Stock Protective Provisions. At any time when any shares of Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition

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to any other vote required by law or this Certificate of Incorporation) the prior written consent of the Investor Majority (the "**Investor Majority Consent**") and any such act or transaction entered into without such consent or vote shall be null and void, and of no force or effect:

3.3.1 alter or change the rights, preferences or privileges of the Preferred Stock;

3.3.2 amend any provision of the Corporation's Certificate of Incorporation or bylaws;

3.3.3 create or issue any new class or series of shares in the capital of the Corporation having rights, preferences or privileges senior to or on a parity with the Series B Preferred Stock (including with respect to redemption, liquidation preference, and voting or dividends);

3.3.4 effect a merger, consolidation, sale of any, all or substantially all of the assets of the Corporation, or other reorganization of the Corporation (or a subsidiary of the Corporation) resulting in a Liquidity Event, or consent to any of the foregoing;

3.3.5 sell, exclusively license or otherwise transfer of all or substantially all of the assets of the Corporation or consent to any of the foregoing;

3.3.6 liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any merger or consolidation or any other Liquidity Event, or consent to any of the foregoing;

3.3.7 acquire a controlling interest in any other person;

3.3.8 acquire or dispose of the all or substantially all the assets of any other person or merge the Corporation or any part of its business with any other person or propose to do so;

3.3.9 agree to credit lines, leases or borrowings or indebtedness in the nature of borrowings, in a single or related series of transactions, in excess of $100,000;

3.3.10 adopt any employee stock option plan or other employee compensation or incentive program, or increase the number of shares available under such a plan or arrangement, or otherwise increase the number of shares reserved for issuance to directors, officers,

employees or consultants of the Corporation; and

3.3.11 increase or decrease the number of members of the Board.

3.4 Series B Preferred Stock Protective Provisions. Notwithstanding anything to the contrary in Section 3.3, at any time when any shares of Series B Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following:

3.4.1 amend, alter or repeal any provision of the Certificate of Incorporation of the Corporation in a manner that disproportionately and adversely affects the powers, preferences or rights of the Series B Preferred Stock without (in addition to any other vote required by law or this Certificate of Incorporation) the prior written consent of the holders of at least 53% of the Series B Preferred Stock and any such act or transaction entered into without such consent or vote shall be null and void, and of no force or effect; provided, however, that the Participation Cap with respect to the Series B Preferred Stock may not be amended, altered, waived or repealed without the prior written consent of the holders of at least 55% of the Series B Preferred Stock and any such act or transaction entered into without such consent or vote shall be null and void, and of no force or effect;

3.4.2 create or issue any new class or series of shares in the capital of the Corporation having rights, preferences or privileges senior to or on parity with the Series B Preferred Stock (including with respect to redemption, liquidation preference, voting or dividends) without (in addition to any other vote required by law or this Certificate of Incorporation) the prior written consent of the holders of at least 53% of the Series B Preferred Stock and any such act or transaction entered into without such consent or vote shall be null and void, and of no force or effect;

3.4.3 effect a merger, consolidation, sale of any, all or substantially all of the assets of the Corporation, or other reorganization of the Corporation (or a subsidiary of the Corporation) resulting in a Liquidity Event, or consent to any of the foregoing that results in the holders of Series B Preferred Stock receiving less than their full liquidation preference as set forth in Section 2.1.1 without (in addition to any other vote required by law or this Certificate of Incorporation) the prior written consent of the holders of at least 55% of the Series B Preferred Stock and any such act or transaction entered into without such consent or vote shall be null and void, and of no force or effect;

3.4.4 liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any merger or consolidation or any other Liquidity Event, or consent to any of the foregoing that results in the holders of Series B Preferred Stock receiving less than their full liquidation preference as set forth in Section 2.1.1 without (in addition to any other vote required by law or this Certificate of Incorporation) the prior written consent of the holders of at least 55% of the Series B Preferred Stock and any such act or transaction entered into without such consent or vote shall be null and void, and of no force or effect;

3.4.5 increase or decrease the authorized number of shares of Series B Preferred Stock without (in addition to any other vote required by law or this Certificate of Incorporation) the prior written consent of the holders of at least 55% of the Series B Preferred Stock and any such act or transaction entered into without such consent or vote shall be null and void, and of no force or effect.

4. Optional Conversion. The holders of the Preferred Stock shall have conversion rights as follows (the "**Conversion Rights**"):

4.1 Right to Convert.

4.1.1 Conversion Ratio. Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of Common Stock (but not Common A Stock) as is determined by dividing the applicable Original Issue Price by the applicable Conversion Price (as defined below) in effect at the time of conversion. The "**Conversion Price**" for (i) the Series Seed Preferred Stock shall initially be equal to $10.00 (the "**Series Seed Conversion Price**"), (ii) the Series A Preferred Stock shall initially be equal to $34.70 (the "**Series A Conversion Price**") and (iii) the Series B Preferred Stock shall initially be equal to $63.79 (the "**Series B Conversion Price**"). Such initial Conversion Prices, and the rate at which shares of Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2 Termination of Conversion Rights. In the event of a liquidation, dissolution or winding up of the Corporation or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Preferred Stock.

4.2 Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock (but not Common A Stock) as determined in good faith by the Board of Directors of the Corporation. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of Preferred Stock the holder is at the time converting into Common Stock (but not Common A Stock) and the aggregate number of shares of Common Stock (but not Common A Stock) issuable upon such conversion.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Preferred Stock to voluntarily convert shares of Preferred Stock into shares of Common Stock (but not Common A Stock), such holder shall (a) provide written notice to the Corporation's transfer agent at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent) that such holder elects to convert all or any number of such holder's shares of Preferred Stock and, if applicable, any event on which such conversion is contingent and (b), if such holder's shares are certificated, surrender the certificate or certificates for such shares of Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent). Such notice shall state such holder's name or the names of the nominees in which such holder wishes

the shares of Common Stock to be issued. If required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such notice and, if applicable, certificates (or lost certificate affidavit and agreement) shall be the time of conversion (the "**Conversion Time**"), and the shares of Common Stock (but not Common A Stock) issuable upon conversion of the specified shares shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time (i) issue and deliver to such holder of Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock (but not Common A Stock) issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, (ii) pay in cash such amount as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock (but not Common A Stock) otherwise issuable upon such conversion and (iii) pay all declared but unpaid dividends on the shares of Preferred Stock converted.

4.3.2 Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Common Stock (but not Common A Stock) as shall from time to time be sufficient to effect the conversion of all outstanding Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock (but not Common A Stock) shall not be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock (but not Common A Stock) to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to the Certificate of Incorporation. Before taking any action which would cause an adjustment reducing the applicable Conversion Price below the then par value of the shares of Common Stock issuable upon conversion of the Preferred Stock, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and non-assessable shares of Common Stock (but not Common A Stock) at such adjusted applicable Conversion Price.

4.3.3 Effect of Conversion. All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Subsection 4.2 and to receive payment of any dividends declared but unpaid thereon. Any shares of Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the applicable Conversion Price shall be made for any declared but unpaid dividends on the Preferred Stock surrendered for conversion or on the Common Stock (but not Common A Stock) delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) "**Option**" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) "**Series B Original Issue Date**" shall mean the date on which the first share of Series B Preferred Stock was issued.

(c) "**Convertible Securities**" shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock (but not Common A Stock), but excluding Options.

(d) "**Additional Shares of Common Stock**" shall mean all shares of Common Stock issued (or, pursuant to Subsection 4.4.3 below, deemed to be issued) by the Corporation after the Series B Original Issue Date, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, "Exempted Securities"):

(i) shares of Common Stock, Options or Convertible Securities issued as a dividend or distribution on Preferred Stock;

(ii) shares of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Subsection 4.5, 4.6, 4.7 or 4.8;

(iii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors of the Corporation, including a majority of the Investor Directors;

(iv) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided such issuance is pursuant to the terms of such Option or Convertible Security (including for the avoidance of doubt, the issuance of Series Seed Preferred Stock pursuant to the exercise of warrants outstanding from time to time);

(v) any shares of stock or other securities issued by the Corporation in consideration of a bona fide acquisition by the Corporation of any company or business provided that both the acquisition and the terms of the proposed issuance of shares of stock or other securities have been approved by (a) the Board of Directors of the Corporation, including a majority of the Investor Directors and (b) the Investor Majority; or

(vi) subject to Section 4.4.2 hereof any shares of stock or Convertible Securities which the Board and the Investor Majority have agreed in writing should be issued (or granted).

4.4.2 No Adjustment of Conversion Price. No adjustment in the applicable Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least 60% of the then outstanding shares of the series of Preferred Stock affected by such adjustment agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock as applicable to such affected series of Preferred Stock.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Series B Original Issue Date shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the applicable Conversion Price pursuant to the terms of Subsection 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such

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Option or Convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the Conversion Price computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Conversion Price as would have obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this clause (b) shall have the effect of increasing the Conversion Price to an amount which exceeds the lower of (i) the Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to the Conversion Price pursuant to the terms of Subsection 4.4.4 (either because the consideration per share (determined pursuant to Subsection 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than the Conversion Price then in effect, or because such Option or Convertible Security was issued before the Series B Original Issue Date), are revised after the Series B Original Issue Date as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (2) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.3(a) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Conversion Price pursuant to the terms of Subsection 4.4.4, the Conversion Price shall be readjusted to such Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Conversion Price provided for in this Subsection 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Subsection 4.4.3). If the number of shares of Common Stock issuable upon

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the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the Conversion Price that would result under the terms of this Subsection 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Series B Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.3), without consideration or for a consideration per share less than the applicable Conversion Price in effect immediately prior to such issue, then the Conversion Price shall be reduced, concurrently with such issue, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = (CP_1 * (A + B)) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) "CP_2" shall mean the applicable Conversion Price in effect immediately after such issue of Additional Shares of Common Stock

(b) "CP_1" shall mean the applicable Conversion Price in effect immediately prior to such issue of Additional Shares of Common Stock;

(c) "A" shall mean the number of shares of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issue or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue);

(d) "B" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(e) "C" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of this Subsection 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(a) Cash and Property: Such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors of the Corporation; and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors of the Corporation.

(b) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Subsection 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing:

(i) The total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Conversion Price pursuant to the terms of Subsection 4.4.4 then, upon the final such issuance, the Conversion Price shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Series B Original Issue Date effect a subdivision of the outstanding Common Stock, the Conversion Price in effect immediately before that

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subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Series B Original Issue Date combine the outstanding shares of Common Stock, the Conversion Price in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this subsection shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 Adjustment for Certain Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series B Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Common Stock, then and in each such event the Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the Conversion Price then in effect by a fraction:

(i) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(ii) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter the Conversion Price shall be adjusted pursuant to this subsection as of the time of actual payment of such dividends or distributions; and (b) that no such adjustment shall be made if the holders of Preferred Stock simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock (but not Common A Stock) on the date of such event.

4.7 Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series B Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Common Stock in respect of outstanding shares of Common Stock) or in other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities

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or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock (but not Common A Stock) on the date of such event.

4.8 Adjustment for Merger or Reorganization, etc. Subject to the provisions of Subsection 2.3, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Subsections 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of Preferred Stock shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Preferred Stock.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Conversion Price pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than ten (10) days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of Preferred Stock (but in any event not later than ten (10) days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) the Conversion Price then in effect, and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of Preferred Stock.

4.10 Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Liquidity Event; or

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(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to

be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Preferred Stock and the Common Stock. Such notice shall be sent at least ten (10) days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Events. Upon either (a) the closing of the sale of shares of Common Stock to the public at a price of at least $95.69 per share (subject to any Adjustment Event), in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, resulting in at least $30 million of proceeds, net of the underwriting discount and commissions, to the Corporation ("**Qualifying IPO**") or (b) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of at least 75% of the then outstanding shares of Preferred Stock, voting together as a single-class on an as-converted basis and not separate series (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "**Mandatory Conversion Time**"), then (i) all outstanding shares of Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective conversion rate as calculated pursuant to Subsection 4.1.1 and (ii) such shares may not be reissued by the Corporation; provided, however, that a mandatory conversion of the outstanding shares of Series B Preferred Stock pursuant to clause (b) above that is in connection with a Liquidity Event and the holders of outstanding shares of Series B Preferred Stock (with respect to their shares of Series B Preferred Stock) would receive less than their full liquidation preference under Section 2.1.1 hereof or less than the amount that the holders of outstanding shares of Series B Preferred Stock (with respect to their shares of Series B Preferred Stock) would have received pursuant to Section 2.1.1 and Section 2.1.4 but for the mandatory conversion under clause (b) above, then the holders of at least 55% of the outstanding shares of Series B Preferred Stock must approve such conversion.

5.2 Procedural Requirements. All holders of record of shares of Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Preferred Stock in certificated form shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate

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affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Subsection 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender any certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of any certificate or certificates of such holders (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Subsection 5.2. As soon as practicable after the Mandatory Conversion Time and, if applicable, the surrender of any certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock, the Corporation shall (a) issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof and (b)pay cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

6. Redemption. The Preferred Stock is not redeemable at the option of the holder thereof.

7. Waiver. Whenever the capital stock of the Corporation is divided into different classes or series of shares, the special rights attached to any such class or series may only be varied or abrogated with the consent in writing of the holders of a majority of the issued shares of that class or series except that the special rights attaching to each series of Preferred Stock may only be waived with (x) with respect to the Series Seed Preferred Stock and the Series A Preferred Stock, the prior written consent of the holders of at least a majority of the shares of such series then-outstanding, and (y) with respect to the Series B Preferred Stock, the prior written consent of the holders of at least 55% of the shares of Series B Preferred Stock then-outstanding.

8. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

ARTICLE FIFTH

Subject to any additional vote required by the Certificate of Incorporation or Bylaws, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is

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expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

ARTICLE SIXTH

Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

ARTICLE SEVENTH

Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the

Bylaws of the Corporation.

ARTICLE EIGHTH

To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Eighth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended.

Any repeal or modification of the foregoing provisions of this Article Eighth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

ARTICLE NINTH

To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which General Corporation Law permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the General Corporation Law.

Any amendment, repeal or modification of the foregoing provisions of this Article Ninth shall not adversely affect any right or protection of any director, officer or other agent of the Corporation existing at the time of such amendment, repeal or modification.

ARTICLE TENTH

The Corporation renounces, to the fullest extent permitted by law, any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An "**Excluded Opportunity**" is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of (i) any director of the Corporation who is not an employee of the Corporation or any of its subsidiaries, or (ii) any holder of Preferred Stock or any partner, member, director, stockholder, employee or agent of any such holder, other than someone who is an employee of the Corporation or any of its subsidiaries (collectively, "**Covered Persons**"), unless such matter, transaction or interest is presented to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Corporation.

ARTICLE ELEVENTH

Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery in the State of Delaware shall be the sole and exclusive forum for any stockholder (including a beneficial owner) to bring (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation, its directors, officers or employees arising pursuant to any provision of the Delaware General Corporation Law or the Corporation's certificate of incorporation or bylaws or (iv) any action asserting a claim against the Corporation, its directors, officers or employees governed by the internal affairs doctrine, except for, as to each of (i) through (iv) above, any claim as to which the Court of Chancery determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery within ten days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, or for which the Court of Chancery does not have subject matter jurisdiction. If any provision or provisions of this Article Eleventh shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article Eleventh (including, without limitation, each portion of any sentence of this Article Eleventh containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

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THIRD: That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the General Corporation Law.

FOURTH: That this Amended and Restated Certificate of Incorporation, which restates and integrates and further amends the provisions of this Corporation's Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

IN WITNESS WHEREOF, this Second Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 21st day of July, 2017.

By: /s/ Robert Coffin

President

THIRD AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION OF
REPLIMUNE GROUP, INC.

Replimune Group, Inc., a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), **DOES HEREBY CERTIFY:**

FIRST: The name of the Corporation is "Replimune Group, Inc." The date of filing the original Certificate of Incorporation of the Corporation with the Secretary of State of the State of Delaware was July 5, 2017.

SECOND: This Third Amended and Restated Certificate of Incorporation (this "Restated Certificate") has been duly approved by the Board of Directors of the Corporation.

THIRD: This Restated Certificate has been duly adopted by the stockholders of the Corporation in accordance with the provisions of Sections 228, 242 and 245 of the General Corporation Law of the State of Delaware (the "DGCL"), and notice thereof has been given in accordance with the provisions of Section 228 of the DGCL.

FOURTH: The Certificate of Incorporation of this Corporation is hereby amended, integrated and restated to read as follows:

ARTICLE ONE

The name of the Corporation is Replimune Group, Inc.

ARTICLE TWO

The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street, in the City of Wilmington, County of New Castle 19801. The name of the registered agent at such address is The Corporation Trust Company.

ARTICLE THREE

The nature of the business or purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the DGCL.

ARTICLE FOUR

Section 1. Authorized Shares. The total number of shares of all classes of capital stock which the Corporation shall have authority to issue is One Hundred Sixty Million (160,000,000) shares, consisting of:

(a) One Hundred Fifty Million (150,000,000) shares of common stock, par value $0.001 per share ("Common Stock"); and

(b) Ten Million (10,000,000) shares of undesignated preferred stock, par value $0.001 per share (the "Preferred Stock").

Such stock may be issued from time to time by the Corporation for such consideration as may be fixed by the board of directors of the Corporation (the "Board of Directors"). The following is a statement

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of the powers, designations, preferences, privileges, and relative rights in respect of each class of capital stock of the Corporation.

Section 2. Common Stock.

(a) General. The voting, dividend and liquidation rights of the holders of Common Stock are subject to and qualified by the rights of the holders of Preferred Stock.

(b) Voting. Except as otherwise provided by the DGCL or this Restated Certificate and subject to the rights of holders of any series of Preferred Stock, all of the voting power of the stockholders of the Corporation shall be vested in the holders of the Common Stock, and each holder of Common Stock shall have one vote for each share held by such holder on all matters voted upon by the stockholders of the Corporation; provided, however, that, except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment to this Restated Certificate (or on any amendment to a certificate of designations of any series of Preferred Stock) that alters or changes the powers, preferences, rights or other terms of one or more outstanding series of Preferred Stock if the holders of such affected series of Preferred Stock are entitled to vote, either separately or together with the holders of one or more other such series, on such amendment pursuant to this Restated Certificate (or pursuant to a certificate of designations of any series of Preferred Stock) or pursuant to the DGCL. There shall be no cumulative voting.

(c) Dividends. Except as otherwise provided by the DGCL or this Restated Certificate, dividends may be declared and paid on the Common Stock from funds lawfully available therefor if, as and when determined by the Board of Directors and subject to any preferential dividend rights of any then outstanding shares of Preferred Stock.

(d) No Preemptive Rights. The holders of the Common Stock shall have no preemptive rights to subscribe for any shares of any class of stock of the Corporation whether now or hereafter authorized.

(e) No Conversion Rights. The Common Stock shall not be convertible into, or exchangeable for, shares of any other class or classes or of any other series of the same class of the Corporation's capital stock.

(f) Liquidation. Upon the dissolution or liquidation or winding up of the affairs of the Corporation, whether voluntary or involuntary, holders of Common Stock will be entitled to receive all assets of the Corporation available for distribution to its stockholders equally on a per share basis, subject to any preferential rights of any then outstanding shares of Preferred Stock and after payment or provision for payment of the Corporation's debts.

Section 3. Preferred Stock. To the fullest extent authorized by the DGCL, shares of Preferred Stock may be issued from time to time in one or more series, each of such series to have such powers, designations, preferences, and relative, participating, optional, or other special rights, if any, and such qualifications and restrictions, if any, as are stated or expressed in the resolution or resolutions of the Board of Directors providing for such series of Preferred Stock. Different series of Preferred Stock shall not be construed to constitute different classes of shares for the purposes of voting by classes unless expressly so provided in such resolution or resolutions.

Authority is hereby granted to the Board of Directors, acting by resolution or resolutions adopted at any time and from time to time, to create, provide for, designate and issue, out of the authorized but unissued shares of Preferred Stock, one or more series of Preferred Stock, and, in connection with the

creation of any such series of Preferred Stock, to determine and fix the powers, designations, preferences, and relative, participating, optional, or other special rights, if any, and the qualifications and restrictions, if any, including without limitation dividend rights, conversion rights, voting rights (if any), redemption privileges, and liquidation preferences, of such series of Preferred Stock (which need not be uniform among series), all to the fullest extent now or hereafter permitted by the DGCL. Without limiting the generality of the foregoing, the resolution or resolutions providing for the creation or issuance of any series of Preferred Stock may provide that such series shall be superior to, rank equally with, or be junior to any other series of Preferred Stock, all to the fullest extent permitted by law. No resolution, vote, or consent of the holders of the capital stock of the Corporation shall be required in connection with the creation or issuance of any shares of any series of Preferred Stock authorized by and complying with the conditions of this Restated Certificate, the right to any such resolution, vote, or consent being expressly waived by all present and future holders of the capital stock of the Corporation.

Any resolution or resolutions adopted by the Board of Directors pursuant to the authority vested in them by this Section 3 of Article Four shall be set forth in a certificate of designation along with the number of shares of such series of Preferred Stock as to which the resolution or resolutions shall apply and such certificate shall be executed, acknowledged, filed, recorded, and shall become effective, in accordance with Section 103 of the DGCL. Unless otherwise provided in any such resolution or resolutions, the number of shares of any such series of Preferred Stock to which such resolution or resolutions apply may be increased (but not above the total number of authorized shares of Preferred Stock) or decreased (but not below the number of shares of such series of Preferred Stock then outstanding) by a certificate likewise executed, acknowledged, filed and recorded, setting forth a statement that a specified increase or decrease therein has been authorized and directed by a resolution or resolutions likewise adopted by the Board of Directors. In case the number of such shares shall be decreased, the number of shares so specified in the certificate shall resume the status which they had prior to the adoption of the first resolution or resolutions. When no shares of any such series of Preferred Stock are outstanding, either because none were issued or because none remain outstanding, a certificate setting forth a resolution or resolutions adopted by the Board of Directors that none of the authorized shares of such series of Preferred Stock are outstanding, and that none will be issued subject to the certificate of designations previously filed with respect to such series of Preferred Stock, may be executed, acknowledged, filed and recorded in the same manner as previously described and it shall have the effect of eliminating from this Restated Certificate all matters set forth in the certificate of designations with respect to such series of Preferred Stock. If no shares of any such series of Preferred Stock established by a resolution or resolutions adopted by the Board of Directors have been issued, the voting powers, designations, preferences and relative, participating, optional or other rights, if any, with the qualifications, limitations or restrictions thereof, may be amended by a resolution or resolutions adopted by the Board of Directors. In the event of any such amendment, a certificate which (i) states that no shares of such series of Preferred Stock have been issued, (ii) sets forth the copy of the amending resolution or resolutions and (iii) if the designation of such series of Preferred Stock is being changed, indicates the original designation and the new designation, shall be executed, acknowledged, filed, recorded, and shall become effective, in accordance with Section 103 of the DGCL.

ARTICLE FIVE

The Corporation is to have perpetual existence.

ARTICLE SIX

Section 1. Classification of Directors. Effective as of the closing (the "IPO Closing") of the Corporation's first public offering of shares of Common Stock registered pursuant to the Securities Act of 1933, as amended, the Board of Directors shall be divided into three classes of directors, Class I, Class II,

and Class III, such classes to be as nearly equal in number of directors as possible, having staggered three-year terms of office (except to the extent otherwise provided in the next sentence with respect to the initial terms of such classes of directors). The initial term of office of the directors of Class I shall expire as of the first annual meeting of the Corporation's stockholders following the IPO Closing; the initial term of office of the directors of Class II shall expire as of the second annual meeting of the Corporation's stockholders following the IPO Closing; and the initial term of office of the directors of Class III shall expire as of the third annual meeting of the Corporation's stockholders following the IPO Closing. At each annual meeting of stockholders of the Corporation after the IPO Closing, nominees will stand for election to succeed those directors whose terms are to expire as of such annual meeting of stockholders, and such nominees elected at such annual meeting of stockholders shall be elected for a term expiring at the third annual meeting of stockholders following their election. Directors shall hold office until the annual meeting of stockholders in which their term is scheduled to expire as set forth above in this Section 1 of Article Six and until their respective successors are duly elected or qualified or until their earlier death, incapacity, resignation or removal. Those directors already in office immediately prior to the IPO Closing shall be allocated among the three classes of directors contemplated under this Section 1 of Article Six pursuant to a resolution or resolutions adopted by the Board of Directors prior to the IPO Closing.

Section 2. Removal. Subject to the special rights of the holders of any series of Preferred Stock to elect directors, the directors of the Corporation may be removed only for cause by the affirmative vote of the holders of at least seventy-five percent (75%) of the outstanding shares of capital stock of the

Corporation entitled to vote in the election of directors or class of directors, voting together as a single class, at a meeting of the stockholders called for that purpose.

Section 3. Vacancies. Except as the DGCL may otherwise require, any new directorships or vacancies in the Board of Directors, including new directorships resulting from any increase in the number of directors to serve in the Board of Directors and/or any unfilled vacancies by reason of death, resignation, disqualification, removal for cause, failure to elect or otherwise with respect to any director, may be filled only by the vote of a majority of the remaining directors then in office, although less than a quorum, or by the sole remaining director.

Section 4. Number of Directors. Subject to the special rights of the holders of any series of Preferred Stock to elect directors, the number of directors which shall constitute the Board of Directors shall be fixed exclusively by the Board of Directors from time to time in accordance with the by-laws of the Corporation. No decrease in the number of directors constituting the whole board shall shorten the term of any incumbent director.

ARTICLE SEVEN

The Board of Directors shall have the power and authority: (i) to adopt, amend or repeal the Corporation's by-laws, subject to the power of the stockholders of the Corporation entitled to vote with respect thereto to make, alter, amend or repeal the by-laws; provided, that with respect to the powers of stockholders entitled to vote with respect thereto to make, alter, amend or repeal the by-laws, in addition to any other vote otherwise required by law, the affirmative vote of the holders of at least seventy-five percent (75%) of the outstanding shares of capital stock of the Corporation entitled to vote in the election of directors or class of directors, voting together as a single class, shall be required to make, alter, amend or repeal the by-laws of the Corporation; and (ii) to the full extent permitted or not prohibited by law, and without the consent of or other action by the stockholders, to authorize or create mortgages, pledges or other liens or encumbrances upon any or all of the assets, real, personal or mixed, and franchises of the Corporation, including after-acquired property, and to exercise all of the powers of the Corporation in connection therewith.

ARTICLE EIGHT

Except as otherwise provided for by any resolutions of the Board of Directors providing for the issuance of any series of Preferred Stock, effective as of the IPO Closing, any action required or permitted to be taken by the stockholders of the Corporation may be taken only at a duly called annual or special meeting of the stockholders in which such action is properly brought before such meeting, and not by written consent in lieu of such a meeting. Subject to any special rights of the holders of any series of Preferred Stock, and to the requirements of applicable law, special meetings of stockholders of the Corporation may be called only by or at the direction of the Board of Directors pursuant to a resolution adopted by a majority of the total number of directors. Any business transacted at any special meeting of stockholders shall be limited to matters relating to the purpose or purposes stated in the notice of meeting

ARTICLE NINE

The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Restated Certificate, in the manner now or hereafter prescribed by the DGCL, and all rights conferred upon stockholders herein are granted subject to this reservation. Notwithstanding anything to the contrary contained in this Restated Certificate, and notwithstanding that a lesser percentage may be permitted from time to time by applicable law, the affirmative vote of the holders of at least seventy-five percent (75%) of the outstanding shares of capital stock of the Corporation entitled to vote in the election of directors or class of directors, voting together as a single class (in addition to any separate class vote that may in the future be required pursuant to the terms of any outstanding Preferred Stock), shall be required to amend or repeal the provisions of Articles Four (only to the extent it relates to the authority of the Board of Directors to issue shares of Preferred Stock in one or more series, the terms of which may be determined by the Board of Directors), Six, Seven, Eight, Nine, Ten, or Eleven of this Restated Certificate or to reduce the numbers of authorized shares of Common Stock or Preferred Stock.

ARTICLE TEN

Section 1. Limitation of Liability. To the fullest extent permitted by the DGCL as it now exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than permitted prior thereto), no director of the Corporation shall be personally liable to the Corporation or to any of its stockholders for monetary damages for breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability; provided, however, that to the extent required from time to time by applicable law, this Article Ten shall not eliminate or limit the liability of a director, to the extent such liability is provided by applicable law, (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL, or (iv) for any transactions from which the director derived an improper personal benefit.

Section 2. Indemnification. The Corporation shall, to the fullest extent permitted by Section 145 of the DGCL and as further provided in the Corporation's by-laws, each as amended from time to time, indemnify each person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such person is or was, or has agreed to become, a director or officer of the Corporation, or is or was serving, or has agreed to serve, at the request of the Corporation, as a director, officer or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (including any employee benefit plan), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), judgments, fines and

amounts paid in settlement actually and reasonably incurred by him or her or on his or her behalf in connection with such action, suit or proceeding and any appeal therefrom.

Indemnification may include payment by the Corporation of expenses in defending an action or proceeding in advance of the final disposition of such action or proceeding upon receipt of an undertaking by the person indemnified to repay such payment if it is ultimately determined that such person is not entitled to indemnification under this Article Ten, which undertaking may be accepted without reference to the financial ability of such person to make such repayment.

The Corporation shall not indemnify any such person seeking indemnification in connection with a proceeding (or part thereof) initiated by such person unless the initiation thereof was approved by the Board of Directors or except and to the extent otherwise permitted in the Corporation's by-laws or in an agreement between the Corporation and such person.

The indemnification rights provided in this Article Ten (i) shall not be deemed exclusive of any other rights to which those indemnified may be entitled under the Corporation's by-laws, any law, agreement or vote of stockholders or disinterested directors or otherwise, and (ii) shall inure to the benefit of the heirs, executors and administrators of such persons. The Corporation may, to the extent authorized from time to time by its Board of Directors, grant indemnification rights to other employees or agents of the Corporation or other persons serving the Corporation and such rights may be equivalent to, or greater or less than, those set forth in this Article Ten.

Section 3. Merger or Consolidation. For purposes of this Article Ten, references to the "Corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under this Article Ten with respect to the resulting or surviving corporation as he or she would have with respect to such constituent corporation if its separate existence had continued.

Section 4. Amendment or Repeal. No amendment to or repeal of this Article Ten shall apply to or have any effect on the liability or alleged liability of any director for or with respect to any acts or omissions of such director occurring prior to the effective date of such amendment or repeal.

ARTICLE ELEVEN

Section 1. Delaware Forum. Unless the Corporation, as authorized by the Board of Directors, consents in writing to the selection of one or more alternative forums, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for a stockholder (including a beneficial owner) to bring (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation arising pursuant to any provision of the DGCL or this Restated Certificate or the Corporation's by-laws or (iv) any action asserting a claim against the Corporation, its directors, officers or employees governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the Corporation (including, without limitation, shares of Common Stock) shall, and shall be deemed to, have notice of and to have consented to the provisions of this Article Eleven.

Section 2. Federal Forum. Unless the Corporation consents in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933. Any person or entity purchasing or otherwise acquiring any interest in any security of the Corporation shall be deemed to have notice of and consented to the provisions of this Article Eleven.

ARTICLE TWELVE

If any provision or provisions of this Restated Certificate shall be held to be invalid, illegal or unenforceable as applied to any circumstance for any reason whatsoever: (i) the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Restated Certificate (including, without limitation, each portion of any paragraph of this Restated Certificate containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby and (ii) to the fullest extent possible, the provisions of this Restated Certificate (including, without limitation, each such portion of any paragraph of this Restated Certificate containing any such provision held to be invalid, illegal or unenforceable) shall be construed so as to permit the Corporation to protect its directors, officers, employees and agents from personal liability in respect of their good faith service to or for the benefit of the Corporation to the fullest extent permitted by law.

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IN WITNESS WHEREOF, this Third Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this Corporation on this day of July, 2018.

REPLIMUNE GROUP, INC.

By: _____
Name: Robert Coffin
Title: President

[Signature Page to Third Amended and Restated Certificate of Incorporation of Replimune Group, Inc.]

Exhibit 3.4

REPLIMUNE GROUP, INC.

AMENDED AND RESTATED BY-LAWS

Article I. - General.

1.1. Offices. The registered office of Replimune Group, Inc. (the "Company") shall be in the City of Wilmington, County of New Castle, State of Delaware. The Company may also have offices at such other places both within and without the State of Delaware as the board of directors of the Company (the "Board of Directors") may from time to time determine or the business of the Company may require.

1.2. Seal. The seal, if any, of the Company shall be in the form of a circle and shall have inscribed thereon the name of the Company, the year of its organization and the words "Corporate Seal, Delaware."

1.3. Fiscal Year. The fiscal year of the Company shall be fixed by resolution of the Board of Directors.

Article II. - Stockholders.

2.1. Place of Meetings. Each meeting of the stockholders shall be held upon notice as hereinafter provided, at such place as the Board of Directors shall have determined and as shall be stated in such notice, either within or outside the State of Delaware.

2.2. Annual Meeting. The annual meeting of the stockholders shall be held each year on such date and at such time as the Board of Directors may determine. At each annual meeting the stockholders entitled to vote shall elect such members of the Board of Directors as are standing for election, by plurality vote by ballot, and they may transact such other corporate business as may properly be brought before the meeting. At the annual meeting any business may be transacted, irrespective of whether the notice calling such meeting shall have contained a reference thereto, except where notice is required by law, the Company's Amended and Restated Certificate of Incorporation (as amended from time to time, the "Company's Certificate of Incorporation"), or these By-laws.

2.3. Quorum and Adjournment. At all meetings of the stockholders, the holders of a majority of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum requisite for the transaction of business except as otherwise provided by law, the Company's Certificate of Incorporation, or these By-laws. Whether or not there is such a quorum at any meeting, the presiding officer of the meeting may adjourn the meeting from time to time without notice other than announcement at the meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. At such adjourned meeting, at which the requisite amount of voting stock shall be represented, any business may be transacted that might have been transacted if the meeting had been held as originally called. The stockholders present in person or by proxy at a duly called meeting at which a quorum is present may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum.

2.4. Right to Vote; Proxies. Subject to the provisions of the Company's Certificate of Incorporation, each holder of a share or shares of capital stock of the Company having the right to vote at any meeting shall be entitled to one vote for each such share of stock held by such stockholder. Any stockholder entitled to vote at any meeting of stockholders may vote either in person or by proxy, but no

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proxy that is dated more than three (3) years prior to the meeting at which it is offered shall confer the right to vote thereat unless the proxy provides that it shall be effective for a longer period. A proxy may be granted by a writing executed by the stockholder or his or her authorized agent or by transmission or authorization of transmission by means of electronic transmission to the person who will be the holder of the proxy or to a proxy solicitation firm, proxy support service organization, or like agent duly authorized by the person who will be the holder of the proxy to receive such transmission, subject to the conditions set forth in Section 212 of the Delaware General Corporation Law, as it may be amended from time to time (the "DGCL").

2.5. Voting. At all meetings of stockholders, except as otherwise expressly provided for by statute, the Company's Certificate of Incorporation, or these By-laws, (i) in all matters other than the election of directors, the affirmative vote of a majority of shares present in person or represented by proxy at the meeting and entitled to vote on such matter shall be the act of the stockholders, and (ii) directors shall be elected by a plurality of the votes cast, present in person or represented by proxy at the meeting and entitled to vote on the election of directors.

2.6. Notice of Annual Meetings. Written notice of the annual meeting of the stockholders shall be mailed to each stockholder of record entitled to vote thereat at such address as appears on the stock books of the Company at least ten (10) days (and not more than sixty (60) days) prior to the meeting. The Board of Directors may postpone any annual meeting of the stockholders at its discretion, even after notice thereof has been mailed. It shall be the duty of every stockholder to furnish to the Secretary of the Company or to the transfer agent, if any, of the class of stock owned by him or her, such stockholder's post-office address, and to notify the Secretary of any change therein. Notice need not be given to any stockholder who submits a written waiver of notice signed by him or her before or after the time stated therein. Attendance of a stockholder at a meeting of stockholders shall constitute a waiver of notice of such meeting, except when the stockholder attends the meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice.

2.7. Stockholders' List. A complete list of the stockholders entitled to vote at any meeting of stockholders, arranged in alphabetical order and showing the address of each stockholder, and the number of shares registered in the name of each stockholder, shall be prepared by the Secretary and shall be open to the examination of any stockholder, for any purpose germane to the meeting for a period of at least ten (10) days before such meeting (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours, at the principal place of business of the Company, and said list shall be produced and kept at the time and place of such meeting during the whole time of said meeting, and may be inspected by any stockholder who is present at the place of said meeting, or, if the meeting is to be held solely by means of remote communication, on a reasonably accessible electronic network and the information required to access such list shall be provided with the notice of the meeting.

2.8. Special Meetings. Special meetings of the stockholders for any purpose or purposes, unless otherwise provided by law, may be called only in the manner set forth in the Company's Certificate of Incorporation. Any such person or persons that has or have called a special meeting of stockholders in the manner set forth in the Company's Certificate of Incorporation may postpone or cancel any special meeting of the stockholders at its or their discretion, even after notice thereof has been mailed.

2.9. Notice of Special Meetings. Written notice of a special meeting of stockholders, stating the time and place and purpose or purposes thereof, shall be mailed, postage prepaid, not less than ten

(10) nor more than sixty (60) days before such meeting, to each stockholder of record entitled to vote thereat, at such address as appears on the books of the Company. No business may be transacted at such meeting except that referred to in said notice, or in a supplemental notice given also in compliance with the provisions hereof, or such other business as may be germane or supplementary to that stated in said notice or notices. The individual or group calling such meeting shall have exclusive authority to determine the business included in such notice. Notice need not be given to any stockholder who submits a written waiver of notice signed by him or her before or after the time stated therein. Attendance of a stockholder at a meeting of stockholders shall constitute a waiver of notice of such meeting, except when the stockholder attends the meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice.

2.10. Inspectors of Elections; Opening and Closing the Polls.

(a) One or more inspectors may be appointed by the Board of Directors before or at any meeting of stockholders, or, if no such appointment shall have been made, the presiding officer may make such appointment at the meeting. At the meeting for which the inspector or inspectors are appointed, he, she or they shall open and close the polls, receive and take charge of the proxies and ballots, and decide all questions touching on the qualifications of voters, the validity of proxies, and the acceptance and rejection of votes. If any inspector previously appointed shall fail to attend or refuse or be unable to serve, the presiding officer shall appoint an inspector in his or her place.

(b) At any time at which the Company has a class of voting stock that is (i) listed on a national securities exchange, (ii) authorized for quotation on an inter-dealer quotation system of a registered national securities association, or (iii) held of record by more than 2,000 stockholders, the provisions of Section 231 of the DGCL with respect to inspectors of election and voting procedures shall apply, in lieu of the provisions of paragraph (a) of this Section 2.10.

2.11. Stockholders' Consent in Lieu of Meeting. Unless otherwise provided in the Company's Certificate of Incorporation, any action required to be taken at any annual or special meeting of stockholders of the Company, or any action that may be taken at any annual or special meeting of such stockholders, may be taken only at such a meeting, and not by written consent of the stockholders.

2.12. Advance Notice of Stockholder Business and Nominations.

(a) Timely Notice. At a meeting of the stockholders, only such nominations of persons for the election of directors and such other business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, nominations or such other business must be: (i) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the Board of Directors or any committee thereof, (ii) otherwise properly brought before the meeting by or at the direction of the Board of Directors or any committee thereof, or (iii) otherwise properly brought before the meeting by a stockholder who is a stockholder of record or beneficial owner of shares of the Company's capital stock at the time such notice of meeting is delivered, who is entitled to vote at the meeting and who complies with the notice procedures set forth in this Section 2.12. In addition, any proposal of business (other than the nomination of persons for election to the Board of Directors) must be a proper matter for stockholder action. For business (including, but not limited to, director nominations) to be properly brought before an annual meeting by a stockholder, the Proposing Stockholder (as defined below) must have given timely and proper notice thereof pursuant to this Section 2.12, in writing to the Secretary of the Company even if such matter is already the subject of any notice to the stockholders or a disclosure made in a press release reported by the Dow Jones News Services, The Associated Press or a

comparable national news service or in a document filed by the Company with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") from the Board of Directors (a "Public Disclosure"). For purposes of these By-laws, Proposing Stockholder means (i) the stockholder providing the notice of proposed business or director nomination, (ii) the beneficial owner of the Company's capital stock, if different, on whose behalf the proposed business or director nomination, as applicable, is given, (iii) any affiliate or associate (as defined under the Exchange Act) of such stockholder or beneficial owner, (iv) each person who is a member of a "group" (for purposes of these By-laws, as such term is used in Rule 13d-5 under the Exchange Act) with any such stockholder or beneficial owner (or their respective affiliates and associates) or is otherwise Acting in Concert (as defined below) with any such stockholder or beneficial owner (or their respective affiliates and associates) with respect to the proposals or proposed nominations, as applicable, and (v) any participant (as defined in paragraphs (a)(ii)-(vi) of Instruction 3 to Item 4 of Schedule 14A, or any successor instructions) with such stockholder or beneficial owner in the solicitation of proxies in respect of any proposed nominations or other business proposed to be brought before the Company's stockholders. To be timely, a Proposing Stockholder's notice must be delivered to or mailed and received at the principal executive offices of the Company: (x) not later than the close of business on the ninetieth (90th) calendar day, nor earlier than the close of business on the one hundred twentieth (120th) calendar day in advance of the anniversary of the previous year's annual meeting if such meeting is to be held on a day which is not more than thirty (30) calendar days in advance of the anniversary of the previous year's annual meeting or not later than sixty (60) calendar days after the anniversary of the previous year's annual meeting; and (y) with respect to any other annual meeting of stockholders, the close of business on the tenth (10th) calendar day following the date of Public Disclosure of the date of such meeting. In no event shall the Public Disclosure of an adjournment or postponement of an annual meeting commence a new notice time period (or extend any notice time period). For purposes of these By-laws, "close of business" shall mean 5:00 p.m. local time at the principal executive offices of the Company on any calendar day, whether or not such day is a business day.

(b) Stockholder Nominations. For the nomination of any person or persons for election to the Board of Directors, a Proposing Stockholder's notice to the Secretary of the Company shall set forth (i) the name, age, business address and residence address of each nominee proposed in such notice, (ii) the principal occupation or employment of each such nominee, (iii) the number of shares of capital stock of the Company which are owned of record and beneficially by each such nominee (if any), (iv) such other information concerning each such nominee as would be required to be disclosed in a proxy statement soliciting proxies for the election of such nominee as a director in an election contest (even if an election contest is not involved) or that is otherwise required to be disclosed, under Section 14(a) of the Exchange Act and the rules and regulations promulgated thereunder, (v) the consent of the nominee to being named in the proxy statement as a nominee and to serving as a director if elected, and (vi) as to the Proposing Stockholder: (A) the name and address of the Proposing Stockholder as they appear on the Company's books and of the beneficial owner, if any, on whose behalf the nomination is being made, (B) the class and number of shares of the Company which are owned by the Proposing Stockholder (beneficially and of record) and owned by the beneficial owner, if any, on whose behalf the nomination is being made, as of the date of the Proposing Stockholder's notice, and a representation that the Proposing Stockholder will notify the Company in writing of the class and number of such shares owned of record and beneficially as of the record date for the meeting promptly following the later of the record date or the date notice of the record date is first publicly disclosed, (C) a description of any agreement, arrangement or understanding with respect to such nomination between or among the Proposing Stockholder and the beneficial owner, if any, on whose behalf the nomination is being made, and any of their affiliates or associates, and any others (including their names) Acting in Concert with any of the foregoing, and a representation that the Proposing Stockholder will notify the Company in writing of any such agreement, arrangement or understanding in effect as of the record date for the meeting promptly following the later of the record date or the date notice of the record date is first publicly disclosed, (D) a description of any

agreement, arrangement or understanding (including any derivative or short positions, profit interests, options, hedging transactions, and borrowed or loaned shares) that has been entered into as of the date of the Proposing Stockholder's notice by, or on behalf of, the Proposing Stockholder or any of its affiliates or associates, the effect or intent of which is to mitigate loss to, manage risk or benefit of share price changes for, or increase or decrease the voting power of the Proposing Stockholder, or any such beneficial owner, or any of its affiliates or associates with respect to shares of stock of the Company, and a representation that the Proposing Stockholder will notify the Company in writing of any such agreement, arrangement or understanding in effect as of the record date for the meeting promptly following the later of the record date or the date notice of the record date is first publicly disclosed, (E) a representation that the Proposing Stockholder is a holder of record of shares of the Company entitled to vote at the meeting and intends to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice, (F) a representation as to whether the Proposing Stockholder intends to deliver a proxy statement and/or form of proxy to holders of at least the percentage of the Company's outstanding capital stock required to approve the nomination and/or otherwise to solicit proxies from stockholders in support of the nomination, (G) the full notional amount of any securities that, directly or indirectly, underlie any "derivative security" (as such term is defined in Rule 16a-1(c) under the Exchange Act) that constitutes a "call equivalent position" (as such term is defined in Rule 16a-1(b) under the Exchange Act) (together, a "Synthetic Equity Position") and that is, directly or indirectly, held or maintained by such Proposing Stockholder with respect to any shares of any class or series of shares of the Company; *provided that*, for the purposes of the definition of "Synthetic Equity Position," the term "derivative security" shall also include any security or instrument that would not otherwise constitute a "derivative security" (as such term is defined in Rule 16a-1(c) under the Exchange Act) as a result of any feature that would make any conversion, exercise or similar right or privilege of such security or instrument becoming determinable only at some future date or upon the happening of a future occurrence, in which case the determination of the amount of securities into which such security or instrument would be convertible or exercisable shall be made assuming that such security or instrument is immediately convertible or exercisable at the time of such determination; and, *provided, further*, that any Proposing Stockholder satisfying the requirements of Rule 13d-1(b)(1) under the Exchange Act (other than a Proposing Stockholder that so satisfies Rule 13d-1(b)(1) under the Exchange Act solely by reason of Rule 13d-1(b)(1)(ii)(E)) shall not be deemed to hold or maintain the notional amount of any securities that underlie a Synthetic Equity Position held by such Proposing Stockholder as a hedge with respect to a bona fide derivatives trade or position of such Proposing Stockholder arising in the ordinary course of such Proposing Stockholder's business as a derivatives dealer and (H) all other information relating to such Proposing Stockholder that would be required to be disclosed in a proxy statement or other filing if such a filing was to be made by any Proposing Stockholder in connection with the contested solicitation of proxies or consents (even if a contested solicitation is not involved) by any Proposing Stockholder in support of the business or nomination proposed to be brought before the meeting pursuant to this Section 2.12 and Regulation 14A under the Exchange Act. The Company may require any proposed nominee to furnish such other information as it may reasonably require to determine the eligibility of such proposed nominee to serve as an independent director of the Company or that could be material to a reasonable stockholder's understanding of the independence, or lack thereof, of such nominee. For purposes of these By-laws, a person shall be deemed to be "Acting in Concert" with another person if such person knowingly acts (whether or not pursuant to an express agreement, arrangement or understanding) in concert with, or towards a common goal relating to the management, governance or control of the Company in parallel with, such other person where (A) each person is conscious of the other person's conduct or intent and this awareness is an element in their decision-making processes and (B) at least one additional factor suggests that such persons intend to act in concert or in parallel, which such additional factors may include, without limitation, exchanging information (whether publicly or privately), attending meetings, conducting discussions, or making or soliciting invitations to act in concert or in parallel; provided, however, that a person shall not be deemed to be Acting in Concert with any other person solely as a result of the solicitation or receipt of revocable proxies, or special meeting demands from such other

person in response to a solicitation made pursuant to, and in accordance with, Section 14(a) of the Exchange Act by way of a proxy statement filed on Schedule 14A. A person deemed to be Acting in Concert with another person shall be deemed to be Acting in Concert with any third party who is also Acting in Concert with such other person.

(c) Other Stockholder Proposals. For all business other than director nominations, a Proposing Stockholder's notice to the Secretary of the Company shall set forth as to each matter the Proposing Stockholder proposes to bring before the annual meeting: (i) a brief description of the business desired to be brought before the annual meeting and the reasons for conducting such business at the annual meeting, (ii) the text of the proposal or business (including the text of any resolutions proposed for consideration), (iii) a description in reasonable detail of any interest of any Proposing Stockholder in such business, including any anticipated benefit to the stockholder or any other Proposing Stockholder therefrom, including any interest that will be disclosed to the Company's stockholders in any proxy statement to be distributed to the Company's stockholders, (iv) any other information relating to such stockholder and beneficial owner, if any, on whose behalf the proposal is being made, required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for the proposal and pursuant to and in accordance with Section 14(a) of the Exchange Act and the rules and regulations promulgated thereunder and (v) the information required by Section 2.12(b)(vi) above.

(d) Proxy Rules. In addition to the provisions of this Section 2.12, a Proposing Stockholder shall also comply with all applicable requirements of the Exchange Act and the rules and regulations promulgated thereunder, the DGCL, and other applicable law with respect to any nominations of directors for election at any stockholders' meeting and any business that may be brought before any stockholders' meeting and any solicitations of proxies in connection therewith and any filings required to be made with the SEC in connection therewith. Nothing in this Section 2.12 shall be deemed to affect any rights of stockholders to request inclusion of proposals in the Company's proxy statement pursuant to Rule 14a-8 under the Exchange Act or any other rights conferred on stockholders by a rule under the Exchange Act.

(e) Notwithstanding anything to the contrary contained in this Section 2.12, the information required to be included in a Proposing Stockholder's notice of business or director nomination shall not include any ordinary course business activities of any broker, dealer, commercial bank, trust company or other nominee who, in the ordinary course of business, is directed to prepare and submit such notice on behalf of a beneficial owner of the shares held of record by such broker, dealer, commercial bank, trust company or other nominee and who is not otherwise affiliated or associated with such beneficial owner.

(f) Updating of Notice of Proposed Business or Director Nomination.

(i) A stockholder providing notice of any business proposed to be conducted at an annual meeting or notice of a director nomination shall further update and supplement such notice, as necessary, from time to time, so that the information provided or required to be provided in such notice pursuant to Sections 2.12(b) and 2.12(c) shall be true, correct and complete in all respects not only prior to the deadline for submitting such notice but also at all times thereafter and prior to the annual meeting, and such update and supplement shall be received by the Secretary of the Company not later than the earlier of (A) five (5) business days following the occurrence of any event, development or occurrence which would cause the information provided to be not true, correct and complete in all respects, and (B) ten (10) business days prior to the meeting at which such proposals or nominations contained therein are to be considered.

(ii) If the information submitted pursuant to Section 2.12(b) or 2.12(c) by any stockholder proposing business for consideration at an annual meeting or a director

nomination shall not be true, correct and complete in all respects prior to the deadline for submitting such notice, such information may be deemed not to have been provided in accordance with this Section 2.12. For the avoidance of doubt, the updates required pursuant to this Section 2.12 do not cause a notice that was not in compliance with this Section 2.12 when first delivered to the Company prior to the deadline for submitting such notice to thereafter be in proper form in accordance with this Section 2.12.

(iii) Upon written request by the Secretary of the Company, the Board of Directors (or any duly authorized committee thereof), any stockholder submitting a notice proposing business for consideration at an annual meeting or a director nomination shall provide, within five (5) business days of delivery of such request (or such other period as may be specified in such request), written verification, satisfactory in the reasonable discretion of the Board of Directors, any duly authorized committee thereof or any duly authorized officer of the Company, to demonstrate the accuracy of any information submitted by the stockholder in such notice delivered pursuant to this Section 2.12 (including, if requested by the Company, written confirmation by such stockholder that it continues to intend to bring the business proposed or director nomination referenced in the notice before the meeting). If a stockholder fails to provide such written verification within such period, the information as to which written verification was requested may be deemed not to have been provided in accordance with this Section 2.

(g) Referencing and Cross-Referencing. For a notice proposing business or a director nomination at a stockholders' meeting to comply with the requirements of Sections 2.12(b) and 2.12(c), each of the requirements of Sections 2.12(b) and 2.12(c) shall be directly and expressly responded to and a notice must clearly indicate and expressly reference which provisions of Sections 2.12(b) and 2.12(c) the information disclosed is intended to be responsive to. Information disclosed in one section of a notice in response to one provision of Sections 2.12(b) or 2.12(c) shall not be deemed responsive to any other provision of Sections 2.12(b) or 2.12(c) unless it is expressly cross-referenced to such other provision and it is clearly apparent how the information included in one section of the notice is directly and expressly responsive to the information required to be included in another section of the notice pursuant to Sections 2.12(b) or 2.12(c). For the avoidance of doubt, statements purporting to provide global cross-references that purport to provide that all information provided shall be deemed to be responsive to all requirements of Sections 2.12(b) and 2.12(c) shall not satisfy the requirements of this paragraph (g) of this Section 2.12.

(h) No Incorporation by Reference. For a notice proposing business or a director nomination at a stockholders' meeting to comply with the requirements of Sections 2.12(b) and 2.12(c), it must set forth in writing directly within the body of the notice (as opposed to being incorporated by reference from any other document or writing not prepared in response to the requirements of this Section 2.12) all the information required to be included therein as set forth in Sections 2.12(b) and 2.12(c) and each of the requirements of Sections 2.12(b) and 2.12(c) shall be directly responded to in a manner that makes it clearly apparent how the information provided is specifically responsive to any requirements of Sections 2.12(b) and 2.12(c). For the avoidance of doubt, a notice shall not be deemed to be in compliance with Section 2.12 if it attempts to include the required information by incorporating by reference into the body of the notice any other document, writing or part thereof, including, but not limited to, any documents publicly filed with the U.S. Securities and Exchange Commission. For the further avoidance of doubt, the body of the notice does not include any documents not prepared in response to the requirements of this Section 2.12.

(i) Accuracy of Information. A stockholder submitting a notice of proposed business or director nomination, by its delivery to the Company, represents and warrants that all information contained therein, as of the deadline for submitting such notice, is true, accurate and complete in all respects, contains no false and misleading statements and such stockholder acknowledges that it intends

for the Company and the Board of Directors to rely on such information as (i) being true, accurate and complete in all respects and (ii) not containing any false or misleading statements.

(j) Special Meetings of Stockholders. Only such business shall be conducted at a special meeting of stockholders as shall have been brought before the meeting pursuant to the Company's notice of meeting. Nominations of persons for election to the Board of Directors may be made at a special meeting of stockholders at which directors are to be elected pursuant to the Company's notice of meeting (x) by or at the direction of the Board of Directors or any committee thereof or (y) provided that the Board of Directors has determined that directors shall be elected at such meeting, by any stockholder of the Company who is a beneficial owner or stockholder of record at the time the notice provided for in this Section 2.12 is delivered to the Secretary of the Company, who is entitled to vote at the meeting and upon such election and who complies with the notice procedures set forth in this Section 2.12. In the event the Company calls a special meeting of stockholders for the purpose of electing one or more directors to the Board of Directors, any such stockholder entitled to vote in such election of directors may nominate a person or persons (as the case may be) for election to such position(s) as specified in the Company's notice of meeting, if the stockholder's notice required by this Section 2.12 shall be delivered to the Secretary at the principal executive offices of the Company not later than the later of the close of business on the ninetieth (90th) day prior to such special meeting or the tenth (10th) day following the date of Public Disclosure of the date of the special meeting and of the nominees proposed by the Board of Directors to be elected at such meeting and not earlier than the close of business on the one hundred twentieth (120th) day prior to such special meeting. In no event shall the Public Disclosure of an adjournment or postponement of a special meeting commence a new time period (or extend any notice time period).

(k) Effect of Noncompliance. Notwithstanding anything in these By-laws to the contrary, (i) no nominations shall be made or business shall be conducted at any annual meeting except in accordance with the procedures set forth in this Section 2.12, and (ii) unless otherwise required by law, if a Proposing Stockholder intending to propose business or make nominations at an annual meeting pursuant to this Section 2.12 does not provide the information required under this Section 2.12 to the Company promptly following the later of the record date or the date notice of the record date is first publicly disclosed, or the Proposing Stockholder (or a qualified representative of the Proposing Stockholder) does not appear at the meeting to present the proposed business or nominations, such business or nominations shall not be considered, notwithstanding that proxies in respect of such business or nominations may have been received by the Company. For purposes of these By-laws, "qualified representative" means (i) if the stockholder is a corporation, any duly authorized officer of such corporation, (ii) if the stockholder is a limited liability company, any duly authorized member, manager or officer of such limited liability company, (iii) if the stockholder is a partnership, any general partner or person who functions as general partner for such partnership, (iv) if the stockholder is a trust, the trustee of such trust, or (v) if the stockholder is an entity other than the foregoing, the persons acting in such similar capacities as the foregoing with respect to such entity.

Article III. - Directors.

3.1. Number of Directors.

(a) Except as otherwise provided by law, the Company's Certificate of Incorporation, or these By-laws, the property and business of the Company shall be managed by or under the direction of the Board of Directors. Directors need not be stockholders, residents of Delaware, or citizens of the United States. The use of the phrase "whole board" herein refers to the total number of directors which the Company would have if there were no vacancies.

(b) Subject to the special rights of the holders of any series of Preferred Stock to elect directors, the number of directors constituting the full Board of Directors shall be as determined by the Board of Directors from time to time by resolution adopted by the affirmative vote of at least a majority of the directors then in office.

(c) Effective as of the closing (the "IPO Closing") of the Company's first public offering of shares of Common Stock registered pursuant to the Securities Act of 1933, as amended, the Board of Directors shall be divided into three classes of directors, such classes to be as nearly equal in number of directors as possible, having staggered three-year terms of office (except to the extent otherwise provided in the next sentence with respect to the initial term of such classes of directors). The initial term of office of the directors of the first such class shall expire as of the first annual meeting of the Company's stockholders following the IPO Closing; the initial term of office of the directors of the second such class shall expire as of the second annual meeting of the Company's stockholders following the IPO Closing; and the initial term of office of the directors of the third such class shall expire as of the third annual meeting of the Company's stockholders following the IPO Closing. At each annual meeting of stockholders of the Company after the IPO Closing, nominees will stand for election to succeed those directors whose terms are to expire as of such annual meeting of stockholders, and such nominees elected at such annual meeting of stockholders shall be elected for a term expiring at the third annual meeting of stockholders following their election.

(d) Directors shall hold office until the annual meeting of stockholders in which their term is scheduled to expire as set forth above in this Section 3.1 and until their respective successors are duly elected or qualified or until their earlier death, incapacity, resignation or removal. Any director serving as such pursuant to this Section 3.1 may be removed pursuant to Section 3.3. Those directors already in office immediately prior to the IPO Closing shall be allocated among the three (3) classes of directors contemplated under this Section 3.1 pursuant to a resolution or resolutions adopted by the Board of Directors prior to the IPO Closing.

(e) Except as the DGCL or the Company's Certificate of Incorporation may otherwise require, any new directorships or vacancies in the Board of Directors, including new directorships resulting from any increase in the number of directors to serve on the whole board and/or any unfilled vacancies by reason of death, resignation, disqualification, removal for cause, failure to elect or otherwise with respect to any director, may be filled by only the vote of a majority of the remaining directors then in office, although less than a quorum, or by the sole remaining director.

(f) No decrease in the number of directors constituting the whole board shall shorten the term of any incumbent director.

3.2. Resignation. Any director of the Company may resign at any time by giving notice in writing or by electronic transmission to the Chairperson of the Board, the President, or the Secretary of the Company. Such resignation shall take effect at the time specified therein, at the time of receipt if no time is specified therein and at the time of acceptance if the effectiveness of such resignation is conditioned upon its acceptance. Unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective.

3.3. Removal. Except as may otherwise be provided by the DGCL or the Company's Certificate of Incorporation, any director or the entire Board of Directors may be removed only for cause and only by the vote of the holders of at least seventy-five percent (75%) of the outstanding shares of capital stock of the Company entitled to vote for the election of directors or class of directors, voting together as single class, at a meeting of the stockholders called for that purpose.

3.4. **Place of Meetings and Books.** The Board of Directors may hold their meetings and keep the books of the Company outside the State of Delaware, at such places as they may from time to time determine.

3.5. **General Powers.** In addition to the powers and authority expressly conferred upon them by these By-laws, the Board of Directors may exercise all such powers of the Company and do all such lawful acts and things as are not by statute or by the Company's Certificate of Incorporation or by these By-laws directed or required to be exercised or done by the stockholders.

3.6. **Committees.** The Board of Directors may designate one or more committees, by resolution or resolutions passed by at least a majority vote of the Board of Directors; such committee or committees shall consist of one or more directors of the Company, and to the extent provided in the resolution or resolutions designating them, shall have and may exercise specific powers of the Board of Directors in the management of the business and affairs of the Company to the extent permitted by statute and shall have power to authorize the seal of the Company to be affixed to all papers that may require it. Such committee or committees shall have such name or names as may be determined from time to time by resolution adopted by the Board of Directors.

3.7. **Powers Denied to Committees.** Committees of the Board of Directors shall not, in any event, have any power or authority to amend the Company's Certificate of Incorporation (except that a committee may, to the extent authorized in the resolution or resolutions providing for the issuance of shares adopted by the Board of Directors as provided in Section 151(a) of the DGCL, fix the designations and any of the preferences or rights of such shares relating to dividends, redemption, dissolution, any distribution of assets of the Company or the conversion into, or the exchange of such shares for, shares of any other class or classes or any other series of the same or any other class or classes of stock of the Company or fix the number of shares of any series of stock or authorize the increase or decrease of the shares of any series), adopt an agreement of merger or consolidation, recommend to the stockholders the sale, lease, or exchange of all or substantially all of the Company's property and assets, recommend to the stockholders a dissolution of the Company or a revocation of a dissolution, or amend the By-laws of the Company. Further, no committee of the Board of Directors shall have the power or authority to declare a dividend, to authorize the issuance of stock, or to adopt a certificate of ownership and merger pursuant to Section 253 of the DGCL, unless the resolution or resolutions designating such committee expressly so provides.

3.8. **Substitute Committee Member.** In the absence or on the disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he, she or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of such absent or disqualified member. Any committee shall keep regular minutes of its proceedings and report the same to the Board of Directors as may be required by the Board of Directors.

3.9. **Compensation of Directors.** The Board of Directors shall have the power to fix the compensation of directors and members of committees of the Board. The directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors, a stated amount per annum as director and/or other forms of compensation as the Board of Directors may approve. No such payment shall preclude any director from serving the Company in any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed like compensation for attending committee meetings.

3.10. **Regular Meetings.** No notice shall be required for regular meetings of the Board of Directors for which the time and place have been fixed.

3.11. **Special Meetings.** Special meetings of the Board of Directors may be called by the Chairperson of the Board of Directors, if any, or the Chief Executive Officer, on two (2) days' notice, which may be written, oral or by electronic transmission, to each director, or such shorter period of time before the meeting as will nonetheless be sufficient for the convenient assembly of the directors so notified; special meetings shall be called by the Secretary in like manner and on like notice, on the written request of two (2) or more directors.

3.12. **Quorum.** At all meetings of the Board of Directors, a majority of the members of the Board of Directors shall be necessary and sufficient to constitute a quorum for the transaction of business, and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except as may be otherwise specifically permitted or provided by statute, by the Company's Certificate of Incorporation, or by these By-laws. If at any meeting of the Board of Directors there shall be less than a quorum present, a majority of those present may adjourn the meeting from time to time until a quorum is obtained, and no further notice thereof need be given other than by announcement at said meeting that shall be so adjourned.

3.13. **Telephonic Participation in Meetings.** Members of the Board of Directors or any committee designated by the Board of Directors may participate in a meeting of the Board of Directors or committee by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear one another, and participation in a meeting pursuant to this section shall constitute presence in person at such meeting.

3.14. **Action by Consent.** Unless otherwise restricted by the Company's Certificate of Incorporation or these By-laws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if written consent thereto is signed or submitted by electronic transmission by all members of the Board of Directors or of such committee as the case may be, and such written consent is filed with the minutes of proceedings of the Board of Directors or committee.

3.15. **Chairperson of the Board**. The Board of Directors may elect or remove, by the affirmative vote of at least a majority of the directors then in office, a Chairperson. Any Chairperson must be a director of the Company. The Chairperson shall preside at all meetings of the Board of Directors and at all meetings of the stockholders and, subject to the provisions of these By-laws and the direction of the Board of Directors, the Chairperson shall have such powers and perform such duties that are commonly incident to the position of chairperson of the board or as may be prescribed from time to time by the Board of Directors or provided in these By-laws.

Article IV. - Officers.

4.1. **Selection; Statutory Officers.** The officers of the Company shall be chosen by the Board of Directors. There shall be a President, a Secretary, and a Treasurer, and there may be a Chairperson of the Board of Directors, a Chief Executive Officer, one or more Vice Presidents, one or more Assistant Secretaries, and one or more Assistant Treasurers, as the Board of Directors may elect. Any number of offices may be held by the same person.

4.2. **Time of Election.** The officers above named shall be chosen by the Board of Directors at its first meeting after each annual meeting of stockholders. Other than the Chairperson, none of said officers need be a director.

4.3. **Additional Officers.** The Board of Directors may appoint such other officers and agents as it shall deem necessary, who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board of Directors.

4.4. **Terms of Office.** Each officer of the Company shall hold office until such officer's successor is chosen and qualified, or until such officer's earlier death, resignation or removal. Any officer may be removed at any time by the Board of Directors.

4.5. **Compensation of Officers.** The Board of Directors shall have power to fix the compensation of all officers of the Company. It may authorize any officer, upon whom the power of appointing subordinate officers may have been conferred, to fix the compensation of such subordinate officers.

4.6. **Chief Executive Officer.** The Chief Executive Officer, if any, in the absence or disability of the Chairperson of the Board, shall preside at all meetings of the stockholders, shall have general and active management of the business of the Company, and shall see that all orders and resolutions of the Board of Directors are carried into effect. The Chief Executive Officer shall execute bonds, mortgages, and other contracts requiring a seal, under the seal of the Company, except where required or permitted by law to be otherwise signed and executed and except where the signing and execution thereof shall be expressly delegated by the Board of Directors to some other officer or agent of the Company. In the absence of the Chief Executive Officer, the President, the Chairperson, or another officer of the Company, as designated by the Board of Directors, shall have the powers of the Chief Executive Officer.

4.7. **President and Vice-Presidents.** The President shall act in an executive capacity as shall be directed from time to time by the Board of Directors or the Chief Executive Officer, and shall have such powers and perform such other duties as the Board of Directors or the Chief Executive Officer may determine from time to time (which may include, without limitation, assisting the Chief Executive Officer in the operation and administration of the Company's business and the supervision of its policies and affairs), with such limitations on such powers or performance of duties as either of the foregoing shall prescribe. The Vice-President, or if there shall be more than one, the Vice-Presidents in the order determined by the Board of Directors, shall, in the absence or disability of the President, perform the duties and exercise the powers of the President and shall perform such other duties and have such powers as the Board of Directors may, from time to time, determine or as these By-laws may prescribe.

4.8. **Treasurer.** The Treasurer shall have the care and custody of all the funds and securities of the Company that may come into his or her hands as Treasurer, and the power and authority to endorse checks, drafts and other instruments for the payment of money for deposit or collection when necessary or proper and to deposit the same to the credit of the Company in such bank or banks or depository as the Board of Directors, or the officers or agents to whom the Board of Directors may delegate such authority, may designate, and such officer may endorse all commercial documents requiring endorsements for or on behalf of the Company. The Treasurer may sign all receipts and vouchers for the payments made to the Company. The Treasurer shall render an account of such officer's transactions to the Board of Directors as often as the Board of Directors or the committee shall require the same. The Treasurer shall enter regularly in the books to be kept by such officer for that purpose full and adequate account of all moneys received and paid by him or her on account of the Company. The Treasurer shall perform all acts incident to the position of Treasurer, subject to the control of the Board of Directors. The Treasurer shall when requested, pursuant to vote of the Board of Directors, give a bond to the Company conditioned for the faithful performance of such officer's duties, the expense of which bond shall be borne by the Company.

4.9. **Secretary.** The Secretary shall keep the minutes of all meetings of the Board of Directors and of the stockholders; such officer shall attend to the giving and serving of all notices of the Company. Except as otherwise ordered by the Board of Directors, such officer shall attest the seal of the Company upon all contracts and instruments executed under such seal and shall affix the seal of the Company thereto and to all certificates of shares of capital stock of the Company. The Secretary shall have charge of the stock certificate book, transfer book and stock ledger, and such other books and papers as the Board of Directors may direct. The Secretary shall, in general, perform all the duties of Secretary, subject to the control of the Board of Directors.

4.10. **Assistant Secretary.** The Board of Directors or any two of the officers of the Company acting jointly may appoint or remove one or more Assistant Secretaries of the Company. Any Assistant Secretary upon such officer's appointment shall perform such duties of the Secretary, and also any and all such other duties as the Board of Directors or the President or a Vice-President or the Treasurer or the Secretary may designate.

4.11. **Assistant Treasurer.** The Board of Directors or any two of the officers of the Company acting jointly may appoint or remove one or more Assistant Treasurers of the Company. Any Assistant Treasurer upon such officer's appointment shall perform such of the duties of the Treasurer, and also any and all such other duties as the Board of Directors or the President or a Vice-President or the Treasurer or the Secretary may designate.

4.12. **Subordinate Officers.** The Board of Directors may select such subordinate officers as it may deem desirable. Each such officer shall hold office for such period, have such authority, and perform such duties as the Board of Directors may prescribe. The Board of Directors may, from time to time, authorize any officer to appoint and remove subordinate officers and to prescribe the powers and duties thereof.

4.13. **Delegation of Authority.** The Board of Directors may from time to time delegate the powers or duties of any officer to any other officer or agent, notwithstanding any provision hereof.

4.14. **Removal.** The Board of Directors may remove any officer of the Company at any time, with or without cause.

Article V. - Stock.

5.1. Stock. The shares of the Company's capital stock may be certificated or uncertificated and shall be entered in the books of the Company and registered as they are issued. Any certificate representing shares of stock issued to a stockholder of the Company (i) shall be numbered, (ii) shall certify the holder's name, the number of shares and the class or series of stock, (iii) shall otherwise be in such form as the Board of Directors shall prescribe, (iv) shall be signed by both of (a) either the President or a Vice-President, and (b) any one of the Treasurer or an Assistant Treasurer or the Secretary or an Assistant Secretary, and (v) shall be sealed with the corporate seal of the Company, if any. If such certificate is countersigned (l) by a transfer agent other than the Company or its employee, or, (2) by a registrar other than the Company or its employee, the signature of the officers of the Company and the corporate seal may be facsimiles. In case any officer or officers who shall have signed, or whose facsimile signature or signatures shall have been used on, any such certificate or certificates shall cease to be such officer or officers of the Company, whether because of death, resignation or otherwise, before such certificate or certificates shall have been delivered by the Company, such certificate or certificates may nevertheless be adopted by the Company and be issued and delivered as though the person or persons who signed such certificate or certificates or whose facsimile signature shall have been used thereon had not ceased to be such officer or officers of the Company.

5.2. Fractional Share Interests. The Company may, but shall not be required to, issue fractions of a share. If the Company does not issue fractions of a share, it shall (i) arrange for the disposition of fractional interests by those entitled thereto, (ii) pay in cash the fair value of fractions of a share as of the time when those entitled to receive such fractions are determined, or (iii) issue scrip or warrants in registered or bearer form that shall entitle the holder to receive a certificate for a full share upon the surrender of such scrip or warrants aggregating a full share. A certificate for a fractional share shall, but scrip or warrants shall not unless otherwise provided therein, entitle the holder to exercise voting rights, to receive dividends thereon, and to participate in any of the assets of the Company in the event of liquidation. The Board of Directors may cause scrip or warrants to be issued subject to the conditions that they shall become void if not exchanged for certificates representing full shares before a specified date, or subject to the conditions that the shares for which scrip or warrants are exchangeable may be sold by the Company and the proceeds thereof distributed to the holders of scrip or warrants, or subject to any other conditions that the Board of Directors may impose.

5.3. Transfers of Stock.

Subject to any transfer restrictions then in force, the shares of stock of the Company shall be transferable only upon its books by the holders thereof in person or by their duly authorized attorneys or legal representatives.

If the shares of stock of the Company to be transferred are certificated shares, then, subject to the provisions of Section 5.7 below, the holder of the certificate or certificates representing such shares shall surrender to the Company or the transfer agent of the Company such certificate or certificates duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, and, subject to any transfer restrictions then in force, the Company or the transfer agent of the Company shall cancel such certificate or certificates upon receipt thereof or upon compliance by such holder with the provisions of Section 5.7 below and (i) deliver to the applicable stockholder transferee either a new certificate or certificates representing the number of shares transferred or appropriate documentation evidencing the applicable stockholder transferee's record ownership of a number of uncertificated shares equal to the number of shares transferred, and, if applicable, (ii) deliver to the applicable stockholder transferor a new certificate or certificates representing the number of shares not transferred that were previously represented by the certificate or certificates so surrendered or appropriate documentation evidencing the applicable stockholder transferor's record ownership of a number of uncertificated shares equal to such number of shares not transferred. Any transfer or transfers in compliance with the provisions of this paragraph shall be recorded upon the books of the Company.

If the shares of stock of the Company to be transferred are uncertificated shares, then the registered owner of such shares shall deliver to the Company or the transfer agent of the Company proper transfer instructions, with such proof of authenticity of signature as the Company or its transfer agent or registrar may reasonably require, and, subject to any transfer restrictions then in force that are applicable to such shares, the Company or the transfer agent of the Company shall cancel such shares upon receipt of such transfer instructions and (i) deliver to the applicable stockholder transferee either a new certificate or certificates representing such shares or appropriate documentation evidencing the applicable stockholder transferee's record ownership of such shares in uncertificated form, and, if applicable and required, (ii) deliver to the applicable stockholder transferor appropriate documentation evidencing that the applicable stockholder transferor is no longer the record owner of such shares so transferred. Any transfer or transfers in compliance with the provisions of this paragraph shall be recorded upon the books of the Company.

The Company shall be entitled to treat the holder of record of any share or shares of stock as the holder in fact thereof and accordingly shall not be bound to recognize any equitable or other claim to or

interest in such share on the part of any other person whether or not it shall have express or other notice thereof save as expressly provided by the laws of Delaware.

5.4. Record Date. For the purpose of determining the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or entitled to receive payment of any dividend or other distribution or the allotment of any rights, or entitled to exercise any rights in respect of any change, conversion, or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, that shall not be more than sixty (60) calendar days nor less than ten (10) calendar days before the date of such meeting, nor more than sixty (60) calendar days prior to any other action. If no such record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day before the day on which notice is given, or, if notice is waived, at the close of business on the day before the day on which the meeting is held; the record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto. A determination of stockholders of record entitled to notice of or to vote at any meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

5.5. Transfer Agent and Registrar. The Board of Directors may appoint one or more transfer agents or transfer clerks and one or more registrars and may require all certificates of stock to bear the signature or signatures of any of them.

5.6. Dividends.

(a) Power to Declare. Dividends upon the capital stock of the Company, subject to the provisions of the Company's Certificate of Incorporation, if any, may be declared by the Board of Directors at any regular or special meeting, pursuant to law. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Company's Certificate of Incorporation and the laws of Delaware.

(b) Reserves. Before payment of any dividend, there may be set aside out of any funds of the Company available for dividends such sum or sums as the directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Company, or for such other purpose as the directors shall think conducive to the interest of the Company, and the directors may modify or abolish any such reserve in the manner in which it was created.

5.7. Lost, Stolen, or Destroyed Certificates. No certificates for shares of stock of the Company shall be issued in place of any certificate alleged to have been lost, stolen, or destroyed, except upon production of such evidence of the loss, theft, or destruction and upon indemnification of the Company and its agents to such extent and in such manner as the officers of the Company may from time to time prescribe. Upon compliance with the foregoing provisions of this Section 5.7, the Company may issue (i) a new certificate or certificates of stock or (ii) uncertificated shares, in place of any certificate or certificates previously issued by the Company alleged to have been lost, stolen or destroyed.

5.8. Inspection of Books. The stockholders of the Company, by a majority vote at any meeting of stockholders duly called, or in case the stockholders shall fail to act, the Board of Directors shall have power from time to time to determine whether and to what extent and at what times and places and under what conditions and regulations the accounts and books of the Company (other than the stock ledger) or any of them, shall be open to inspection of stockholders; and no stockholder shall have any

right to inspect any account or book or document of the Company except as conferred by statute or authorized by the Board of Directors or by a resolution of the stockholders.

Article VI. - Miscellaneous Management Provisions.

6.1. Checks, Drafts, and Notes. All checks, drafts, or orders for the payment of money, and all notes and acceptances of the Company shall be signed by such officer or officers, or such agent or agents, as the officers of the Company may designate.

6.2. Notices.

(a) Notices to directors may, and notices to stockholders shall, be in writing or by electronic transmission, and delivered personally, electronically transmitted or mailed to the directors or stockholders at their postage or electronic mail addresses appearing on the books of the Company. Notice by mail and electronic transmission shall be deemed to be given at the time when the same shall be mailed or transmitted. Notice to directors may also be given by telegram, facsimile or orally, by telephone or in person.

(b) Whenever any notice is required to be given under the provisions of any applicable statute or of the Company's Certificate of Incorporation or of these By-laws, an electronic transmission or written waiver of notice, signed by the person or persons entitled to said notice, whether before or after the time stated therein or the meeting or action to which such notice relates, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

6.3. Conflict of Interest. No contract or transaction between the Company and one or more of its directors or officers, or between the Company and any other corporation, partnership, association, or other organization in which one or more of its directors or officers are directors or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board of Directors or committee thereof that authorized the contract or transaction, or solely because his, her, or their votes are counted for such purpose, if: (i) the material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee and the Board of Directors or committee in good faith authorizes the contract or transaction by the affirmative vote of a majority of the disinterested directors, even though the disinterested directors may be less than a quorum; (ii) the material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders of the Company entitled to vote thereon, and the contract or transaction as specifically approved in good faith by vote of such stockholders; or (iii) the contract or transaction is fair as to the Company as of the time it is authorized, approved, or ratified, by the Board of Directors, a committee or the stockholders. Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee that authorizes the contract or transaction.

6.4. Voting of Securities owned by the Company. Subject always to the specific directions of the Board of Directors, (i) any shares or other securities issued by any other corporation and owned or controlled by the Company may be voted in person at any meeting of security holders of such other corporation by the President of the Company if he or she is present at such meeting, or in his or her absence by the Treasurer of the Company if he or she is present at such meeting, and (ii) whenever, in the judgment of the President, it is desirable for the Company to execute a proxy or written consent in respect to any shares or other securities issued by any other corporation and owned by the Company, such proxy

or consent shall be executed in the name of the Company by the President, without the necessity of any authorization by the Board of Directors, affixation of corporate seal or countersignature or attestation by another officer, provided that if the President is unable to execute such proxy or consent by reason of sickness, absence from the United States or other similar cause, the Treasurer may execute such proxy or consent. Any person or persons designated in the manner above stated as the proxy or proxies of the Company shall have full right, power and authority to vote the shares or other securities issued by such other corporation and owned by the Company the same as such shares or other securities might be voted by the Company.

Article VII. - Indemnification.

7.1. Right to Indemnification. Each person who was or is made a party or is threatened to be made a party to or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "Proceeding"), by reason of being or having been a director or officer of the Company or serving or having served at the request of the Company as a director, trustee, officer, employee or agent of another corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to an employee benefit plan (an "Indemnitee"), whether the basis of such proceeding is alleged action or failure to act in an official capacity as a director, trustee, officer, employee or agent or in any other capacity while serving as a director, trustee, officer, employee or agent, shall be indemnified and held harmless by the Company to the fullest extent authorized by the DGCL, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Company to provide broader indemnification rights than permitted prior thereto) (as used in this Article 7, the "Delaware Law"), against all expense, liability and loss (including attorneys' fees, judgments, fines, ERISA excise taxes or penalties and amounts paid in settlement) reasonably incurred or suffered by such Indemnitee in connection therewith and such indemnification shall continue as to an Indemnitee who has ceased to be a director, trustee, officer, employee, or agent and shall inure to the benefit of the Indemnitee's heirs, executors, and administrators; provided, however, that, except as provided in Section 7.2 hereof with respect to Proceedings to enforce rights to indemnification, the Company shall indemnify any such Indemnitee in connection with a Proceeding (or part thereof) initiated by such Indemnitee only if such Proceeding (or part thereof) was authorized by the Board of Directors of the Company. The right to indemnification conferred in this Article 7 shall be a contract right and shall include the right to be paid by the Company the expenses (including attorneys' fees) incurred in defending any such Proceeding in advance of its final disposition (an "Advancement of Expenses"); provided, however, that, if the Delaware Law so requires, an Advancement of Expenses incurred by an Indemnitee shall be made only upon delivery to the Company of an undertaking (an "Undertaking"), by or on behalf of such Indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal (a "Final Adjudication") that such Indemnitee is not entitled to be indemnified for such expenses under this Article 7 or otherwise.

7.2. Right of Indemnitee to Bring Suit. If a claim under Section 7.1 hereof is not paid in full by the Company within sixty (60) days after a written claim has been received by the Company, except in the case of a claim for an Advancement of Expenses, in which case the applicable period shall be twenty (20) days, the Indemnitee may at any time thereafter bring suit against the Company to recover the unpaid amount of the claim. If successful in whole or in part in any such suit, or in a suit brought by the Company to recover an Advancement of Expenses pursuant to the terms of an Undertaking, the Indemnitee shall be entitled to be paid also the expense of prosecuting or defending such suit. In any suit brought by the Indemnitee to enforce a right to indemnification hereunder (but not in a suit brought by the Indemnitee to enforce a right to an Advancement of Expenses) it shall be a defense that the Indemnitee has not met the applicable standard of conduct set forth in the Delaware Law. In addition, any suit by the Company to recover an Advancement of Expenses pursuant to the terms of an Undertaking the Company

shall be entitled to recover such expenses upon a Final Adjudication that, the Indemnitee has not met the applicable standard of conduct set forth in the Delaware Law. Neither the failure of the Company (including its Board of Directors, independent legal counsel, or its stockholders) to have made a determination prior to the commencement of such suit that indemnification of the Indemnitee is proper in the circumstances because the Indemnitee has met the applicable standard of conduct set forth in the Delaware Law, nor an actual determination by the Company (including its Board of Directors, independent legal counsel, or its stockholders) that the Indemnitee has not met such applicable standard of conduct, shall create a presumption that the Indemnitee has not met the applicable standard of conduct or, in the case of such a suit brought by the Indemnitee, be a defense to such suit. In any suit brought by the Indemnitee to enforce a right to indemnification or to an Advancement of Expenses hereunder, or by the Company to recover an Advancement of Expenses pursuant to the terms of an Undertaking, the burden of proving that the Indemnitee is not entitled to be indemnified, or to such Advancement of Expenses, under this Article 7 or otherwise shall be on the Company.

7.3. Non-Exclusivity of Rights. The rights to indemnification and to the Advancement of Expenses conferred in this Article 7 shall not be exclusive of any other right that any person may have or hereafter acquire under any statute, the Company's Certificate of Incorporation, by law, agreement, vote of stockholders or disinterested directors or otherwise.

7.4. Insurance. The Company may maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Company or another corporation, partnership, joint venture, trust or other enterprise against any expense, liability or loss, whether or not the Company would have the power to indemnify such person against such expense, liability or loss under this Article 7 or under the Delaware Law.

7.5. Indemnification of Employees and Agents of the Company. The Company may, to the extent authorized from time to time by the Board of Directors, grant rights to indemnification, and to the Advancement of Expenses, to any employee or agent of the Company to the fullest extent of the provisions of this Article 7 with respect to the indemnification and Advancement of Expenses of directors and officers of the Company.

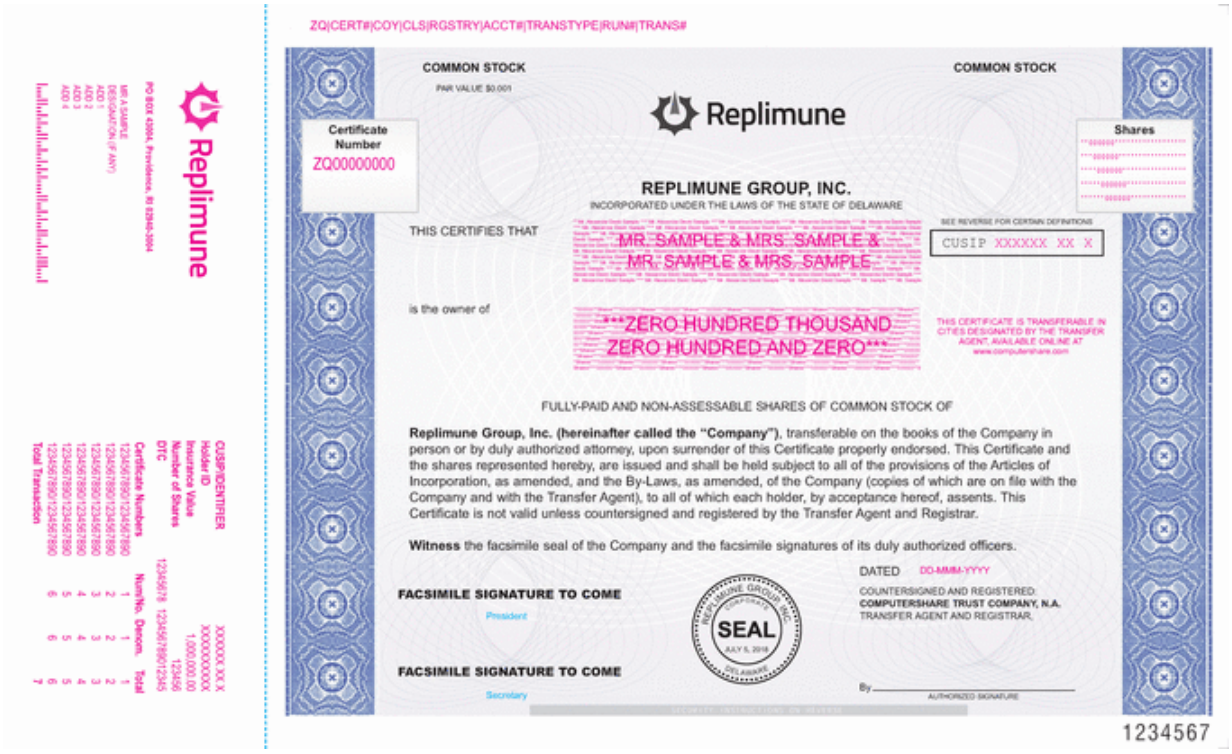
7.6. Merger or Consolidation. For purposes of this Article 7, references to the "Company" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under this Article 7 with respect to the resulting or surviving corporation as he or she would have with respect to such constituent corporation if its separate existence had continued

7.7. Savings Clause. If this Article 7 or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the Company shall nevertheless indemnify and advance expenses to each person entitled to indemnification under Article 7 as to all expense, liability and loss (including attorneys' fees and related disbursements, judgments, fines, ERISA excise taxes and penalties, penalties and amounts paid or to be paid in settlement) actually and reasonably incurred or suffered by such person and for which indemnification or advancement of expenses is available to such person pursuant to this Article 7 to the fullest extent permitted by any applicable portion of this Article 7 that shall not have been invalidated and to the fullest extent permitted by applicable law.

Article VIII. - Amendments.

8.1. **Amendments**. Subject always to any limitations imposed by the Company's Certificate of Incorporation, these By-laws and any amendment thereof may be altered, amended or repealed, or new by-laws may be adopted, by the Board of Directors at any regular or special meeting by the affirmative vote of a majority of all of the members of the Board of Directors, provided in the case of any special meeting at which all of the members of the Board of Directors are not present, that the notice of such meeting shall have stated that the amendment of these By-laws was one of the purposes of the meeting; but these By-laws and any amendment thereof, including the By-laws adopted by the Board of Directors, may be altered, amended or repealed and other By-laws may be adopted by the affirmative vote of holders of at least seventy-five percent (75%) of the outstanding shares of capital stock of the Company entitled to vote in the election of directors or class of directors, voting together as a single class, provided, in the case of any special meeting, that notice of such proposed alteration, amendment, repeal or adoption is included in the notice of the meeting.

* * *



ZQ|CERT#|COY|CLS|RGSTRY|ACCT#|TRANSTYPE|RUN#|TRANS#

COMMON STOCK

PAR VALUE $0.001

COMMON STOCK

Replimune

Certificate Number

ZQ00000000

Shares

REPLIMUNE GROUP, INC.

INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE

THIS CERTIFIES THAT

MR. SAMPLE & MRS. SAMPLE &
MR. SAMPLE & MRS. SAMPLE

SEE REVERSE FOR CERTAIN DEFINITIONS

CUSIP XXXXXX XX X

is the owner of

***ZERO HUNDRED THOUSAND
ZERO HUNDRED AND ZERO***

THIS CERTIFICATE IS TRANSFERABLE IN CITIES DESIGNATED BY THE TRANSFER AGENT, AVAILABLE ONLINE AT www.computershare.com

FULLY-PAID AND NON-ASSESSABLE SHARES OF COMMON STOCK OF

Replimune Group, Inc. (hereinafter called the "Company"), transferable on the books of the Company in person or by duly authorized attorney, upon surrender of this Certificate properly endorsed. This Certificate and the shares represented hereby, are issued and shall be held subject to all of the provisions of the Articles of Incorporation, as amended, and the By-Laws, as amended, of the Company (copies of which are on file with the Company and with the Transfer Agent), to all of which each holder, by acceptance hereof, assents. This Certificate is not valid unless countersigned and registered by the Transfer Agent and Registrar.

Witness the facsimile seal of the Company and the facsimile signatures of its duly authorized officers.

DATED DD-MMM-YYYY

COUNTERSIGNED AND REGISTERED:
COMPUTERSHARE TRUST COMPANY, N.A.
TRANSFER AGENT AND REGISTRAR,

FACSIMILE SIGNATURE TO COME

President

FACSIMILE SIGNATURE TO COME

Secretary

REPLIMUNE GROUP, INC. CORPORATE SEAL JULY 5, 2018 DELAWARE

By _____
AUTHORIZED SIGNATURE

1234567

Replimune

PO BOX 43004, Providence, RI 02940-3004

MR A SAMPLE
DESIGNATION (IF ANY)
ADD 1
ADD 2
ADD 3
ADD 4
ADD 5
ADD 6

CUSIP/IDENTIFIER XXXXXX XX X
Holder ID XXXXXXXXXX
Insurance Value 1,000,000.00
Number of Shares 123456
DTC 12345678 1234567890123456

Certificate Numbers	Num	No.	Denom.	Total
1234567890123456789	1		1	1
1234567890123456789	2		2	2
1234567890123456789	3		3	3
1234567890123456789	4		4	4
1234567890123456789	5		5	5
1234567890123456789	6		6	6
Total Transaction			7	

REPLIMUNE GROUP, INC.

THE COMPANY WILL FURNISH WITHOUT CHARGE TO EACH SHAREHOLDER WHO SO REQUESTS, A SUMMARY OF THE POWERS, DESIGNATIONS, PREFERENCES AND RELATIVE, PARTICIPATING, OPTIONAL OR OTHER SPECIAL RIGHTS OF EACH CLASS OF STOCK OF THE COMPANY AND THE QUALIFICATIONS, LIMITATIONS OR RESTRICTIONS OF SUCH PREFERENCES AND RIGHTS, AND THE VARIATIONS IN RIGHTS, PREFERENCES AND LIMITATIONS DETERMINED FOR EACH SERIES, WHICH ARE FIXED BY THE ARTICLES OF INCORPORATION OF THE COMPANY, AS AMENDED, AND THE RESOLUTIONS OF THE BOARD OF DIRECTORS OF THE COMPANY, AND THE AUTHORITY OF THE BOARD OF DIRECTORS TO DETERMINE VARIATIONS FOR FUTURE SERIES. SUCH REQUEST MAY BE MADE TO THE OFFICE OF THE SECRETARY OF THE COMPANY OR TO THE TRANSFER AGENT. THE BOARD OF DIRECTORS MAY REQUIRE THE OWNER OF A LOST OR DESTROYED STOCK CERTIFICATE, OR HIS LEGAL REPRESENTATIVES, TO GIVE THE COMPANY A BOND TO INDEMNIFY IT AND ITS TRANSFER AGENTS AND REGISTRARS AGAINST ANY CLAIM THAT MAY BE MADE AGAINST THEM ON ACCOUNT OF THE ALLEGED LOSS OR DESTRUCTION OF ANY SUCH CERTIFICATE.

The following abbreviations, when used in the inscription on the face of this certificate, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM	- as tenants in common	UNIF GIFT MIN ACT	- ..... (Cust) Custodian ..... (Minor) under Uniform Gifts to Minors Act..... (State)
TEN ENT	- as tenants by the entireties		
JT TEN	- as joint tenants with right of survivorship and not as tenants in common	UNIF TRF MIN ACT	- ..... (Cust) Custodian (until age .....) ..... (Minor) under Uniform Transfers to Minors Act ..... (State)

Additional abbreviations may also be used though not in the above list.

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE

For value received, _____ hereby sell, assign and transfer unto

_____

(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING POSTAL ZIP CODE, OF ASSIGNEE)

_____

_____

_____ Shares

of the common stock represented by the within Certificate, and do hereby irrevocably constitute and appoint

_____ Attorney

to transfer the said stock on the books of the within-named Company with full power of substitution in the premises.

Dated: _____ 20_____

Signature: _____

Signature: _____

Notice: The signature to this assignment must correspond with the name as written upon the face of the certificate, in every particular, without alteration or enlargement, or any change whatever.

Signature(s) Guaranteed: Medallion Guarantee Stamp

THE SIGNATURE(S) SHOULD BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (Banks, Stockbrokers, Savings and Loan Associations and Credit Unions) WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM, PURSUANT TO S.E.C. RULE 17Ad-15.

SECURITY INSTRUCTIONS

THIS IS WATERMARKED PAPER. DO NOT ACCEPT WITHOUT NOTING WATERMARK. HOLD TO LIGHT TO VERIFY WATERMARK.

The IRS requires that the named transfer agent ("we") report the cost basis of certain shares or units acquired after January 1, 2011. If your shares or units are covered by the legislation, and you requested to sell or transfer the shares or units using a specific cost basis calculation method, then we have processed as you requested. If you did not specify a cost basis calculation method, then we have defaulted to the first in, first out (FIFO) method. Please consult your tax advisor if you need additional information about cost basis.

If you do not keep in contact with the issuer or do not have any activity in your account for the time period specified by state law, your property may become subject to state unclaimed property laws and transferred to the appropriate state.

154291

Exhibit 5.1

July 10, 2018

Replimune Group, Inc.
18 Commerce Way
Woburn, MA 01801

Re: Form S-1 Registration Statement

Ladies and Gentlemen:

We have acted as counsel to Replimune Group, Inc., a Delaware corporation (the "Company"), in connection with the registration by the Company of up to 7,705,000 shares of common stock of the Company, par value $0.001 per share (the "Shares"), which includes up to 1,005,000 shares of common stock subject to the underwriters' option to purchase such shares described in the Registration Statement (as defined below).

The Shares are included in a registration statement on Form S-1 under the Securities Act of 1933, as amended (the "Act"), initially filed with the Securities and Exchange Commission (the "Commission") on June 22, 2018 (Registration No. 333-225846) (the "Registration Statement"). This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or the related prospectus (the "Prospectus"), other than as expressly stated herein with respect to the issuance of the Shares.

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters. We are opining herein as to the General Corporation Law of the State of Delaware (the "DGCL"), and we express no opinion with respect to any other laws.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof, when the Shares shall have been duly registered on the books of the transfer agent and registrar therefor in the name or on behalf of the purchasers and have been issued by the Company against payment therefor in the circumstances contemplated by the form of underwriting agreement most recently filed as an exhibit to the Registration Statement, the issue and sale of the Shares will have been duly authorized by all necessary corporate action of the Company, and the Shares will be validly issued, fully paid, and nonassessable. In rendering the foregoing opinion, we have assumed that the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the DGCL.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Act. We consent to

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your filing this opinion as an exhibit to the Registration Statement and to the reference to our firm in the Prospectus under the heading "Legal Matters". In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ MORGAN, LEWIS & BOCKIUS LLP

Exhibit 10.1

INDEMNIFICATION AGREEMENT

This Indemnification Agreement ("Agreement"), dated as of [ ], is by and between Replimune Group, Inc., a Delaware corporation (the "Company") and [NAME OF DIRECTOR/OFFICER](1) ("Indemnitee").

WHEREAS, Indemnitee is [a director/an officer] of the Company;

WHEREAS, both the Company and Indemnitee recognize the increased risk of litigation and other claims being asserted against directors and officers of public companies;

WHEREAS, the board of directors of the Company (the "Board") has determined that enhancing the ability of the Company to retain and attract as directors and officers the most capable persons is in the best interests of the Company and that the Company therefore should seek to assure such persons that indemnification and insurance coverage is available; and

WHEREAS, in recognition of the need to provide Indemnitee with substantial protection against personal liability, in order to procure Indemnitee's [continued] service as director and/or officer of the Company and to enhance Indemnitee's ability to serve the Company in an effective manner, and in order to provide such protection pursuant to express contract rights (intended to be enforceable irrespective of, among other things, any amendment to the Company's certificate of incorporation or bylaws (collectively, the "Constituent Documents"), any change in the composition of the Board or any change in control or business combination transaction relating to the Company), the Company wishes to provide in this Agreement for the indemnification of, and the advancement of Expenses (as defined in Section 1(f) below) to, Indemnitee as set forth in this Agreement and for the [continued] coverage of Indemnitee under the Company's directors' and officers' liability insurance policies.

NOW, THEREFORE, in consideration of the foregoing and Indemnitee's agreement to continue to provide services to the Company, the parties agree as follows:

1. Definitions. For purposes of this Agreement, the following terms shall have the following meanings:

(a) "Beneficial Owner" has the meaning given to the term "beneficial owner" in Rule 13d-3 under the Securities Exchange Act of 1934, as amended (the "Exchange Act").

(b) "Change in Control" means the occurrence after the date of this Agreement of any of the following events:

(i) any Person is or becomes the Beneficial Owner, directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the Company's then outstanding Voting Securities unless the change in relative Beneficial Ownership of the Company's securities by any Person results solely from a reduction in the aggregate number of outstanding shares of securities entitled to vote generally in the election of directors;

(ii) the consummation of a reorganization, merger or consolidation, unless

(1) Bracketed language throughout to be customized as appropriate.

immediately following such reorganization, merger or consolidation, all of the Beneficial Owners of the Voting Securities of the Company immediately prior to such transaction beneficially own, directly or indirectly, more than fifty percent (50%) of the combined voting power of the outstanding Voting Securities of the entity resulting from such transaction;

(iii) during any period of two consecutive years, not including any period prior to the execution of this Agreement, individuals who at the beginning of such period constituted the Board (including for this purpose any new directors whose election by the Board or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds (2/3) of the directors then still in office who either were directors at the beginning of the period or whose election or nomination for election was previously so approved) cease for any reason to constitute at least a majority of the Board; or

(iv) the stockholders of the Company approve a plan of complete liquidation or dissolution of the Company or an agreement for the sale or disposition by the Company of all or substantially all of the Company's assets.

(c) "Claim" means:

(i) any threatened, pending or completed action, suit, proceeding or alternative dispute resolution mechanism, whether civil, criminal, administrative, arbitrative, investigative or other, and whether made pursuant to federal, state or other law; or

(ii) any inquiry, hearing or investigation that Indemnitee determines might lead to the institution of any such action, suit, proceeding or alternative dispute resolution mechanism.

(d) "Delaware Court" shall have the meaning ascribed to it in Section 8(e) below.

(e) "Disinterested Director" means a director of the Company who is not and was not a party to the Claim in respect of which indemnification is sought by Indemnitee.

(f) "Expenses" means any and all expenses, including attorneys' and experts' fees, reasonably incurred, court costs, transcript costs, travel expenses, duplicating, printing and binding costs, telephone charges, and all other costs and expenses incurred in connection with investigating, defending, being a witness in or participating in (including on appeal), or preparing to defend, be a witness or participate in, any Claim. Expenses also shall include (i) Expenses incurred in connection with any appeal resulting from any Claim, including without limitation the premium, security for, and other costs relating

to any cost bond, supersedeas bond, or other appeal bond or its equivalent, and (ii) for purposes of Section 4 only, Expenses incurred by Indemnitee in connection with the interpretation, enforcement or defense of Indemnitee's rights under this Agreement, by litigation or otherwise. Expenses, however, shall not include amounts paid in settlement by Indemnitee or the amount of judgments or fines against Indemnitee. The parties agree that for the purposes of any advancement of Expenses for which Indemnitee has made written demand to the Company in accordance with this Agreement, all Expenses included in such demand that are certified by affidavit of Indemnitee's counsel as being reasonable shall be presumed conclusively to be reasonable.

(g) "Expense Advance" means any payment of Expenses advanced to Indemnitee by the Company pursuant to Section 3 or Section 4 hereof.

(h) "Indemnifiable Event" means any event or occurrence, whether occurring before, on or after the date of this Agreement, related to the fact that Indemnitee is or was a director, officer, employee or agent of the Company or any subsidiary of the Company, or is or was serving at the request of the Company as a director, officer, employee, member, manager, trustee or agent of any other corporation,

limited liability company, partnership, joint venture, trust or other entity or enterprise (collectively with the Company, "Enterprise") or by reason of an action or inaction by Indemnitee in any such capacity (whether or not serving in such capacity at the time any Loss is incurred for which indemnification can be provided under this Agreement).

(i) "Independent Counsel" means a law firm, or a member of a law firm, that is experienced in matters of corporation law and neither presently performs, nor in the past five (5) years has performed, services for either: (i) the Company or Indemnitee (other than in connection with matters concerning Indemnitee under this Agreement or of other indemnitees under similar agreements) or (ii) any other party to the Claim giving rise to a claim for indemnification hereunder. Notwithstanding the foregoing, the term "Independent Counsel" shall not include any person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Company or Indemnitee in an action to determine Indemnitee's rights under this Agreement.

(j) "Losses" means any and all Expenses, damages, losses, liabilities, judgments, fines, penalties (whether civil, criminal or other), ERISA excise taxes, amounts paid or payable in settlement, including any interest, assessments, any federal, state, local or foreign taxes imposed as a result of the actual or deemed receipt of any payments under this Agreement and all other charges paid or payable in connection with investigating, defending, being a witness in or participating in (including on appeal), or preparing to defend, be a witness or participate in, any Claim.

(k) "Person" means any individual, corporation, firm, partnership, joint venture, limited liability company, estate, trust, business association, organization, governmental entity or other entity and includes the meaning set forth in Sections 13(d) and 14(d) of the Exchange Act.

(l) "Standard of Conduct Determination" shall have the meaning ascribed to it in Section 8(b) below.

(m) "Voting Securities" means any securities of the Company that vote generally in the election of directors.

2. Indemnification. Subject to Section 8 and Section 9 of this Agreement, the Company shall indemnify Indemnitee, to the fullest extent permitted by the laws of the State of Delaware in effect on the date hereof, or as such laws may from time to time hereafter be amended to increase the scope of such permitted indemnification, against any and all Losses if Indemnitee was or is or becomes a party to or participant in, or is threatened to be made a party to or participant in, any Claim by reason of or arising in part out of an Indemnifiable Event, including, without limitation, Claims brought by or in the right of the Company, Claims brought by third parties, and Claims in which Indemnitee is solely a witness.

3. Advancement of Expenses. Indemnitee shall have the right to advancement by the Company, prior to the final disposition of any Claim by final adjudication to which there are no further rights of appeal, of any and all Expenses actually and reasonably paid or incurred by Indemnitee in connection with any Claim arising out of an Indemnifiable Event. Indemnitee's right to such advancement is not subject to the satisfaction of any standard of conduct. Without limiting the generality or effect of the foregoing, within thirty (30) days after any request by Indemnitee, the Company shall, in accordance with such request, (a) pay such reasonable Expenses on behalf of Indemnitee, (b) advance to Indemnitee funds in an amount sufficient to pay such Expenses, or (c) reimburse Indemnitee for such Expenses. In connection with any request for Expense Advances, Indemnitee shall not be required to provide any documentation or information to the extent that the provision thereof would undermine or otherwise jeopardize attorney-client privilege. In connection with any request for Expense Advances, Indemnitee shall execute and deliver to the Company an undertaking (which shall be accepted without reference to Indemnitee's ability to repay

the Expense Advances) to repay any amounts paid, advanced, or reimbursed by the Company for such Expenses to the extent that it is ultimately determined, following the final disposition of such Claim by final adjudication to which there are no further rights of appeal, that Indemnitee is not entitled to indemnification hereunder. Indemnitee's obligation to reimburse the Company for Expense Advances shall be unsecured and no interest shall be charged thereon.

4. Indemnification for Expenses in Enforcing Rights. To the fullest extent allowable under applicable law, the Company shall also indemnify against, and, if requested by Indemnitee, shall advance to Indemnitee subject to and in accordance with Section 3, any Expenses actually and reasonably paid or incurred by Indemnitee in connection with any action or proceeding by Indemnitee for (a) indemnification or reimbursement or advance payment of Expenses by the Company under any provision of this Agreement, or under any other agreement or provision of the Constituent Documents now or hereafter in effect relating to Claims relating to Indemnifiable Events, and/or (b) recovery under any directors' and officers' liability insurance policies maintained by the Company, regardless of whether Indemnitee ultimately is determined to be entitled to such indemnification or insurance recovery, as the case may be. However, in the event that Indemnitee is ultimately determined not to be entitled to such indemnification or insurance recovery, as the case may be, then all amounts advanced under this Section 4 shall be repaid. Indemnitee shall be required to reimburse the Company in the event that a final judicial determination by final adjudication to which there are no further rights of appeal is made that such action brought by Indemnitee was frivolous or not made in good faith.

5. Partial Indemnity. If Indemnitee is entitled under any provision of this Agreement to indemnification by the Company for a portion of any Losses in respect of a Claim related to an Indemnifiable Event but not for the total amount thereof, the Company shall nevertheless indemnify Indemnitee for the

portion thereof to which Indemnitee is entitled.

6. Notification and Defense of Claims.

(a) Notification of Claims. Indemnitee shall notify the Company in writing as soon as practicable of any Claim which could relate to an Indemnifiable Event or for which Indemnitee could seek Expense Advances, including a brief description (based upon information then available to Indemnitee) of the alleged facts underlying, such Claim. The failure by Indemnitee to timely notify the Company hereunder shall not relieve the Company from any liability hereunder unless the Company's ability to participate in the defense of such claim was materially and adversely affected by such failure, except that the Company shall not be liable to indemnify Indemnitee under this Agreement with respect to any judicial award in a Claim related to an Indemnifiable Event if the Company was not given a reasonable and timely opportunity to participate at its expense in the defense of such action. If at the time of the receipt of such notice, the Company has directors' and officers' liability insurance in effect under which coverage for Claims related to Indemnifiable Events is potentially available, the Company shall give prompt written notice to the applicable insurers in accordance with the procedures set forth in the applicable policies. The Company shall provide to Indemnitee a copy of such notice delivered to the applicable insurers, and copies of all subsequent correspondence between the Company and such insurers regarding the Claim, in each case substantially concurrently with the delivery or receipt thereof by the Company.

(b) Defense of Claims. The Company shall be entitled to participate in the defense of any Claim relating to an Indemnifiable Event at its own expense and, except as otherwise provided below, to the extent the Company so wishes, it may assume the defense thereof with counsel reasonably satisfactory to Indemnitee. After notice from the Company to Indemnitee of its election to assume the defense of any such Claim, the Company shall not be liable to Indemnitee under this Agreement or otherwise for any Expenses subsequently directly incurred by Indemnitee in connection with Indemnitee's defense of such Claim other than reasonable costs of investigation or as otherwise provided below. Indemnitee shall have

the right to employ its own legal counsel in such Claim, but all Expenses related to such counsel incurred after notice from the Company of its assumption of the defense shall be at Indemnitee's own expense; provided, however, that if (i) Indemnitee's employment of its own legal counsel has been authorized by the Company, (ii) there is a conflict of interest between Indemnitee and the Company in the defense of such Claim, (iii) after a Change in Control, Indemnitee's employment of its own counsel has been approved by the Independent Counsel or (iv) the Company shall not in fact have employed counsel to assume the defense of such Claim, then Indemnitee shall be entitled to retain its own separate counsel (but not more than one law firm plus, if applicable, local counsel in respect of any such Claim) and all Expenses related to such separate counsel shall be borne by the Company.

7. Procedure upon Application for Indemnification. In order to obtain indemnification pursuant to this Agreement, Indemnitee shall submit to the Company a written request therefor, including in such request such documentation and information as is reasonably available to Indemnitee and is reasonably necessary to determine whether and to what extent Indemnitee is entitled to indemnification following the final disposition of the Claim by final adjudication to which there are no further rights of appeal, provided that documentation and information need not be so provided to the extent that the provision thereof would undermine or otherwise jeopardize attorney-client privilege. Indemnification shall be made insofar as the Company determines Indemnitee is entitled to indemnification in accordance with Section 8 below.

8. Determination of Right to Indemnification.

(a) Mandatory Indemnification; Indemnification as a Witness.

(i) To the extent that Indemnitee shall have been successful on the merits or otherwise in defense of any Claim relating to an Indemnifiable Event or any portion thereof or in defense of any issue or matter therein, including without limitation dismissal without prejudice, Indemnitee shall be indemnified against all Losses relating to such Claim in accordance with Section 2 to the fullest extent allowable by law, and no Standard of Conduct Determination (as defined in Section 8(b)) shall be required.

(ii) To the extent that Indemnitee's involvement in a Claim relating to an Indemnifiable Event is to prepare to serve and serve as a witness, and not as a party, Indemnitee shall be indemnified against all Losses incurred in connection therewith to the fullest extent allowable by law and no Standard of Conduct Determination (as defined in Section 8(b)) shall be required.

(b) Standard of Conduct. To the extent that the provisions of Section 8(a) are inapplicable to a Claim related to an Indemnifiable Event that shall have been finally disposed of, any determination of whether Indemnitee has satisfied any applicable standard of conduct under Delaware law that is a legally required condition to indemnification of Indemnitee hereunder against Losses relating to such Claim and any determination that Expense Advances must be repaid to the Company (a "Standard of Conduct Determination") shall be made as follows:

(i) if no Change in Control has occurred, (A) by a majority vote of the Disinterested Directors, even if less than a quorum of the Board, (B) by a committee of Disinterested Directors designated by a majority vote of the Disinterested Directors, even though less than a quorum or (C) if there are no such Disinterested Directors, by Independent Counsel in a written opinion addressed to the Board, a copy of which shall be delivered to Indemnitee; and

(ii) if a Change in Control shall have occurred, (A) if Indemnitee so requests in writing, by a majority vote of the Disinterested Directors, even if less than a quorum of the Board or (B) otherwise, by Independent Counsel in a written opinion addressed to the Board, a copy of which shall be delivered to Indemnitee.

The Company shall indemnify and hold harmless Indemnitee against and, if requested by Indemnitee, shall reimburse Indemnitee for, or advance to Indemnitee, within thirty (30) days after such request, any and all Expenses incurred by Indemnitee in cooperating with the person or persons making such Standard of Conduct Determination.

(c) Making the Standard of Conduct Determination. The Company shall use its reasonable best efforts to cause any Standard of Conduct Determination required under Section 8(b) to be made as promptly as practicable. If the person or persons designated to make the Standard of Conduct Determination under Section 8(b) shall not have made a determination within sixty (60) days after the later of (A) receipt by the Company of a written request from Indemnitee for indemnification pursuant to Section 7 (the date of such receipt being the "Notification Date") and (B) the selection of an Independent Counsel, if such determination is to be made by Independent Counsel, then Indemnitee shall be deemed to have satisfied the applicable standard of conduct; provided that such sixty (60)-day period may be extended for a reasonable time, not to exceed an additional sixty (60) days if the person or persons making such determination in good faith requires such additional time to obtain or evaluate information relating thereto. Notwithstanding anything in this Agreement to the contrary, no determination as to entitlement of Indemnitee to indemnification under this Agreement shall be required to be made prior to the final disposition of any Claim by final adjudication to which there are no further rights of appeal.

(d) Payment of Indemnification. If, in regard to any Losses:

(i) Indemnitee shall be entitled to indemnification pursuant to Section 8(a);

(ii) no Standard Conduct Determination is legally required as a condition to indemnification of Indemnitee hereunder; or

(iii) Indemnitee has been determined or deemed pursuant to Section 8(b) or Section 8(c) to have satisfied the Standard of Conduct Determination,

then the Company shall pay to Indemnitee, within fifteen (15) days after the later of (A) the Notification Date or (B) the earliest date on which the applicable criterion specified in clause (i), (ii) or (iii) is satisfied, an amount equal to such Losses.

(e) Selection of Independent Counsel for Standard of Conduct Determination. If a Standard of Conduct Determination is to be made by Independent Counsel pursuant to Section 8(b)(i), the Independent Counsel shall be selected by the Board of Directors, and the Company shall give written notice to Indemnitee advising him or her of the identity of the Independent Counsel so selected. If a Standard of Conduct Determination is to be made by Independent Counsel pursuant to Section 8(b)(ii), the Independent Counsel shall be selected by Indemnitee, and Indemnitee shall give written notice to the Company advising it of the identity of the Independent Counsel so selected. In either case, Indemnitee or the Company, as applicable, may, within ten (10) days after receiving written notice of selection from the other, deliver to the other a written objection to such selection; provided, however, that such objection may be asserted only on the ground that the Independent Counsel so selected does not satisfy the criteria set forth in the definition of "Independent Counsel" in Section 1(i), and the objection shall set forth with particularity the factual basis of such assertion. Absent a proper and timely objection, the person or firm so selected shall act as Independent Counsel. If such written objection is properly and timely made and substantiated, (i) the Independent Counsel so selected may not serve as Independent Counsel unless and until such objection is withdrawn or a court has determined that such objection is without merit; and (ii) the non-objecting party may, at its option, select an alternative Independent Counsel and give written notice to the other party advising such other party of the identity of the alternative Independent Counsel so selected, in which case the provisions of the two immediately preceding sentences, the introductory clause of this sentence and

numbered clause (i) of this sentence shall apply to such subsequent selection and notice. If applicable, the provisions of clause (ii) of the immediately preceding sentence shall apply to successive alternative selections. If no Independent Counsel that is permitted under the foregoing provisions of this Section 8(e) to make the Standard of Conduct Determination shall have been selected within thirty (30) days after the Company gives its initial notice pursuant to the first sentence of this Section 8(e) or Indemnitee gives its initial notice pursuant to the second sentence of this Section 8(e), as the case may be, either the Company or Indemnitee may petition the Court of Chancery of the State of Delaware ("Delaware Court") to resolve any objection which shall have been made by the Company or Indemnitee to the other's selection of Independent Counsel and/or to appoint as Independent Counsel a person to be selected by the Court or such other person as the Court shall designate, and the person or firm with respect to whom all objections are so resolved or the person or firm so appointed will act as Independent Counsel. In all events, the Company shall pay all of the reasonable fees and expenses of the Independent Counsel incurred in connection with the Independent Counsel's determination pursuant to Section 8(b).

(f) Presumptions and Defenses.

(i) Indemnitee's Entitlement to Indemnification. In making any Standard of Conduct Determination, the person or persons making such determination shall presume that Indemnitee has satisfied the applicable standard of conduct and is entitled to indemnification, and the Company shall have the burden of proof to overcome that presumption and establish that Indemnitee is not so entitled. Any Standard of Conduct Determination that is adverse to Indemnitee may be challenged by Indemnitee in the Delaware Court. No determination by the Company (including by its directors or any Independent Counsel) that Indemnitee has not satisfied any applicable standard of conduct may be used as a defense to any legal proceedings brought by Indemnitee to secure indemnification or reimbursement or advance payment of Expenses by the Company hereunder or create a presumption that Indemnitee has not met any applicable standard of conduct.

(ii) Reliance as a Safe Harbor. For purposes of this Agreement, and without creating any presumption as to a lack of good faith if the following circumstances do not exist, Indemnitee shall be deemed to have acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Company if Indemnitee's actions or omissions to act are taken in good faith reliance upon the records of the Company, including its financial statements, or upon information, opinions, reports or statements furnished to Indemnitee by the officers or employees of the Company or any of its subsidiaries in the course of their duties, or by committees of the Board or by any other Person (including legal counsel, accountants and financial advisors) as to matters Indemnitee reasonably believes are within such other Person's professional or expert competence and who has been selected with reasonable care by or on behalf of the Company. In addition, the knowledge and/or actions, or failures to act, of any director, officer, agent or employee of the Company shall not be imputed to Indemnitee for purposes of determining the right to indemnity hereunder.

(iii) No Other Presumptions. For purposes of this Agreement, the termination of any Claim by judgment, order, settlement (whether with or without court approval) or conviction, or upon a plea of nolo contendere or its equivalent, will not create a presumption that Indemnitee did not meet any applicable standard of conduct or have any particular belief, or that indemnification hereunder is otherwise not permitted.

(iv) Defense to Indemnification and Burden of Proof. It shall be a defense to any action brought by Indemnitee against the Company to enforce this Agreement (other than an action brought to enforce a claim for Losses incurred in defending against a Claim related to an Indemnifiable Event in advance of its final disposition by final adjudication to which there are no further rights of appeal) that it is not permissible under applicable law for the Company to indemnify Indemnitee for the amount claimed. In

connection with any such action or any related Standard of Conduct Determination, the burden of proving such a defense or that Indemnitee did not satisfy the applicable standard of conduct shall be on the Company.

(v) Resolution of Claims. The Company acknowledges that a settlement or other disposition short of final judgment may be successful on the merits or otherwise for purposes of Section 8(a)(i) if it permits a party to avoid expense, delay, distraction, disruption and uncertainty. In the event that any Claim relating to an Indemnifiable Event to which Indemnitee is a party is resolved in any manner other than by adverse judgment against Indemnitee (including, without limitation, settlement of such action, claim or proceeding with our without payment of money or other consideration) it shall be presumed that Indemnitee has been successful on the merits or otherwise for purposes of Section 8(a)(i). The Company shall have the burden of proof to overcome this presumption.

9. Exclusions from Indemnification. Notwithstanding anything in this Agreement to the contrary, the Company shall not be obligated to:

(a) indemnify or advance funds to Indemnitee for Expenses or Losses with respect to proceedings initiated by Indemnitee, including any proceedings against the Company or its directors, officers, employees or other indemnitees and not by way of defense, except:

(i) proceedings referenced in Section 4 above (unless a court of competent jurisdiction determines that each of the material assertions made by Indemnitee in such proceeding was not made in good faith or was frivolous); or

(ii) where the Company has joined in or the Board has consented to the initiation of such proceedings;

(b) indemnify Indemnitee if a final decision by a court of competent jurisdiction determines that such indemnification is prohibited by applicable law;

(c) indemnify Indemnitee for the disgorgement of profits arising from the purchase or sale by Indemnitee of securities of the Company in violation of Section 16(b) of the Exchange Act, or any similar successor statute; or

(d) indemnify or advance funds to Indemnitee for Indemnitee's reimbursement to the Company of any bonus or other incentive-based or equity-based compensation previously received by Indemnitee or payment of any profits realized by Indemnitee from the sale of securities of the Company, as required in each case under the Exchange Act or other applicable law, including the listing requirements of any exchange on which the Company's securities are listed (including any such reimbursements under Section 304 of the Sarbanes-Oxley Act of 2002 in connection with an accounting restatement of the Company or the payment to the Company of profits arising from the purchase or sale by Indemnitee of securities in violation of Section 306 of the Sarbanes-Oxley Act) or by any Company plan or policy adopted pursuant to or in furtherance of, any of the foregoing.

10. Settlement of Claims. The Company shall not be liable to Indemnitee under this Agreement for any amounts paid in settlement of any threatened or pending Claim related to an Indemnifiable Event effected without the Company's prior written consent, which shall not be unreasonably withheld; provided, however, that if a Change in Control has occurred, the Company shall be liable for indemnification of Indemnitee for amounts paid in settlement if an Independent Counsel has approved the settlement. The Company shall not settle any Claim related to an Indemnifiable Event in any manner that would impose any Losses on Indemnitee without Indemnitee's prior written consent.

11. Duration. All agreements and obligations of the Company contained herein shall continue during the period that Indemnitee is a director or officer of the Company (or is serving at the request of the Company as a director, officer, employee, member, trustee or agent of another Enterprise) and shall continue thereafter (i) so long as Indemnitee may be subject to any possible Claim relating to an Indemnifiable Event (including any rights of appeal thereto) and (ii) throughout the pendency of any proceeding (including any rights of appeal thereto) commenced by Indemnitee to enforce or interpret his or her rights under this Agreement, even if, in either case, he or she may have ceased to serve in such capacity at the time of any such Claim or proceeding.

12. Non-Exclusivity. The rights of Indemnitee hereunder will be in addition to any other rights Indemnitee may have under the Constituent Documents, the General Corporation Law of the State of Delaware, any other contract or otherwise (collectively, "Other Indemnity Provisions"); provided, however, that (a) to the extent that Indemnitee otherwise would have any greater right to indemnification under any Other Indemnity Provision, Indemnitee will be deemed to have such greater right hereunder and (b) to the extent that any change is made to any Other Indemnity Provision which permits any greater right to indemnification than that provided under this Agreement as of the date hereof, Indemnitee will be deemed to have such greater right hereunder. Any prior indemnification agreements between the Company or any affiliated entity of the Company and the Indemnitee are hereby terminated and superseded by this Agreement.

13. Liability Insurance. For the duration of Indemnitee's service as a director and/or officer of the Company, and thereafter for so long as Indemnitee shall be subject to any pending Claim relating to an Indemnifiable Event, the Company shall use commercially reasonable efforts (taking into account the scope and amount of coverage available relative to the cost thereof) to continue to maintain in effect policies of directors' and officers' liability insurance providing coverage that is at least substantially comparable in scope and amount to that provided by the Company's current policies of directors' and officers' liability insurance. In all policies of directors' and officers' liability insurance maintained by the Company, Indemnitee shall be named as an insured in such a manner as to provide Indemnitee the same rights and benefits as are provided to the most favorably insured of the Company's directors, if Indemnitee is a director, or of the Company's officers, if Indemnitee is an officer (and not a director) by such policy. Upon request, the Company will provide to Indemnitee copies of all directors' and officers' liability insurance applications, binders, policies, declarations, endorsements and other related materials.

14. No Duplication of Payments. The Company shall not be liable under this Agreement to make any payment to Indemnitee in respect of any Losses to the extent Indemnitee has otherwise received payment under any insurance policy, the Constituent Documents, Other Indemnity Provisions or otherwise of the amounts otherwise indemnifiable by the Company hereunder.

15. Subrogation. In the event of payment to Indemnitee under this Agreement, the Company shall be subrogated to the extent of such payment to all of the rights of recovery of Indemnitee. Indemnitee shall execute all papers required and shall do everything that may be necessary to secure such rights, including the execution of such documents necessary to enable the Company effectively to bring suit to enforce such rights.

16. Amendments. No supplement, modification or amendment of this Agreement shall be binding unless executed in writing by both of the parties hereto. No waiver of any of the provisions of this Agreement shall be binding unless in the form of a writing signed by the party against whom enforcement of the waiver is sought, and no such waiver shall operate as a waiver of any other provisions hereof (whether or not similar), nor shall such waiver constitute a continuing waiver. Except as specifically provided herein, no failure to exercise or any delay in exercising any right or remedy hereunder shall constitute a waiver

thereof.

17. Binding Effect. This Agreement shall be binding upon and inure to the benefit of and be enforceable by the parties hereto and their respective successors (including any direct or indirect successor by purchase, merger, consolidation or otherwise to all or substantially all of the business and/or assets of the Company), assigns, spouses, heirs and personal and legal representatives. The Company shall require and cause any successor (whether direct or indirect by purchase, merger, consolidation or otherwise) to all, substantially all or a substantial part of the business and/or assets of the Company, by written agreement in form and substances satisfactory to Indemnitee, expressly to assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform if no such succession had taken place.

18. Severability. The provisions of this Agreement shall be severable in the event that any of the provisions hereof (including any portion thereof) are held by a court of competent jurisdiction to be invalid, illegal, void or otherwise unenforceable, and the remaining provisions shall remain enforceable to the fullest extent permitted by law. Upon such determination that any term or other provision is invalid, illegal or unenforceable, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in a mutually acceptable manner in order that the transactions contemplated hereby be consummated as originally contemplated to the greatest extent possible.

19. Notices. All notices, requests, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given if delivered by hand, against receipt, or mailed, by postage prepaid, certified or registered mail:

(a) if to Indemnitee, to the address set forth on the signature page hereto.

(b) if to the Company, to:

Replimune Group, Inc.
18 Commerce Way
Woburn, MA 01801
Attn: Philip Astley-Sparke

Notice of change of address shall be effective only when given in accordance with this Section. All notices complying with this Section shall be deemed to have been received on the date of hand delivery or on the third business day after mailing.

20. Governing Law and Forum. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Delaware applicable to contracts made and to be performed in such state without giving effect to its principles of conflicts of laws. The Company and Indemnitee hereby irrevocably and unconditionally: (a) agree that any action or proceeding arising out of or in connection with this Agreement shall be brought only in the Delaware Court and not in any other state or federal court in the United States; (b) consent to submit to the exclusive jurisdiction of the Delaware Court for purposes of any action or proceeding arising out of or in connection with this Agreement; and (c) waive, and agree not to plead or make, any claim that the Delaware Court lacks venue or that any such action or proceeding brought in the Delaware Court has been brought in an improper or inconvenient forum.

21. Headings. The headings of the sections and paragraphs of this Agreement are inserted for convenience only and shall not be deemed to constitute part of this Agreement or to affect the construction

or interpretation thereof.

22. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall for all purposes be deemed to be an original, but all of which together shall constitute one and the same Agreement.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

REPLIMUNE GROUP, INC.

By: _____

Name:
Title:

INDEMNITEE

By: _____

Name:
Title:

[*Signature Page to Indemnification Agreement*]

Exhibit 10.3

REPLIMUNE GROUP, INC.

2018 OMNIBUS INCENTIVE COMPENSATION PLAN

Effective as of the Effective Date (as defined below), the Replimune Group, Inc. 2018 Omnibus Incentive Compensation Plan (the "Plan") is hereby established.

The purpose of the Plan is to provide employees of Replimune Group, Inc. (the "Company") and its subsidiaries, certain consultants and advisors who perform services for the Company or its subsidiaries, and non-employee members of the Board of Directors of the Company with the opportunity to receive grants of incentive stock options, nonqualified stock options, stock appreciation rights, stock awards, stock units and other stock-based awards.

The Company believes that the Plan will encourage the participants to contribute materially to the growth of the Company, thereby benefitting the Company's stockholders, and will align the economic interests of the participants with those of the stockholders.

The Plan is a successor to the Replimune Group, Inc. 2017 Equity Compensation Plan (the "Prior Plan"). No additional grants shall be made under the Prior Plan after the Effective Date. Outstanding grants under the Prior Plan shall continue in effect according to their terms, consistent with the Prior Plan.

Section 1. Definitions

The following terms shall have the meanings set forth below for purposes of the Plan:

(a) "Board" shall mean the Board of Directors of the Company.

(b) "Cause" shall have the meaning ascribed to such term in any written employment agreement, offer letter or severance agreement between the Employer and the Participant, or in a severance plan or policy sponsored by the Employer and applicable to the Participant, to the extent applicable, or if no such agreement, plan or policy applies to the Participant or if such term is not defined therein, and unless otherwise defined in the Grant Instrument, "Cause" shall mean a finding by the Committee that the Participant (i) has breached his or her employment or service contract with the Employer, (ii) has engaged in disloyalty to the Employer, including, without limitation, fraud, embezzlement, theft, commission of a felony or proven dishonesty, (iii) has disclosed trade secrets or confidential information of the Employer to persons not entitled to receive such information, (iv) has breached any written non-competition, non-solicitation, invention assignment or confidentiality agreement between the Participant and the Employer or (v) has engaged in such other behavior detrimental to the interests of the Employer as the Committee determines.

(c) "CEO" shall mean the Chief Executive Officer of the Company.

(d) A "Change of Control" shall be deemed to have occurred if:

(i) Any "person" (as such term is used in sections 13(d) and 14(d) of the Exchange Act) becomes a "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing more than 50% of the voting power of the then outstanding securities of the Company; provided that a Change of Control shall not be deemed to occur as a result of a transaction in which the Company becomes a subsidiary of another corporation and in which the stockholders of the Company, immediately prior to the transaction, will beneficially own, immediately after the transaction, shares entitling such stockholders to more than 50% of all votes to which all stockholders of the parent corporation would be entitled in the election of directors.

(ii) The consummation of (A) a merger or consolidation of the Company with another corporation where, immediately after the merger or consolidation, the stockholders of the Company, immediately prior to the merger or consolidation, will not beneficially own, in substantially the same proportion as ownership immediately prior to the merger or consolidation, shares entitling such stockholders to more than 50% of all votes to which all stockholders of the surviving corporation would be entitled in the election of directors, or where the members of the Board, immediately prior to the merger or consolidation, will not, immediately after the merger or consolidation, constitute a majority of the board of directors of the surviving corporation or (B) a sale or other disposition of all or substantially all of the assets of the Company.

(iii) A change in the composition of the Board over a period of 12 consecutive months or less such that a majority of the Board members ceases, by reason of one or more contested elections, or threatened election contests, for Board membership, to be comprised of individuals who either (A) have been Board members continuously since the beginning of such period or (B) have been elected or nominated for election as Board members during such period by at least a majority of the Board members described in clause (A) who were still in office at the time the Board approved such election or nomination.

(iv) The consummation of a plan of complete dissolution or liquidation of the Company.

Notwithstanding the foregoing, if a Grant constitutes deferred compensation subject to section 409A of the Code and the Grant provides for payment upon a Change of Control, then, for purposes of such payment provisions, no Change of Control shall be deemed to have occurred upon an event described in items (i) — (iv) above unless the event would also constitute a change in ownership or effective control of, or a change in the ownership of a substantial portion of the assets of, the Company under section 409A of the Code.

(e) "Code" shall mean the Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.

(f) "Committee" shall mean the Compensation Committee of the Board or another committee appointed by the Board to administer the Plan. The Committee shall also consist of directors who are "non-employee directors" as defined under Rule 16b-3 promulgated

under the Exchange Act and "independent directors," as determined in accordance with the independence standards established by the stock exchange on which the Company Stock is at the time primarily traded.

(g) "Company" shall mean Replimune Group, Inc. and shall include its successors.

(h) "Company Stock" shall mean common stock of the Company.

(i) "Disability" or "Disabled" shall mean, unless otherwise set forth in the Grant Instrument, a Participant's becoming disabled within the meaning of the Employer's long-term disability plan applicable to the Participant, or, if there is no such plan, a physical or mental condition that prevents the Participant from performing the essential functions of the Participant's position (with or without reasonable accommodation) for a period of six consecutive months.

(j) "Dividend Equivalent" shall mean an amount determined by multiplying the number of shares of Company Stock subject to a Stock Unit or Other Stock-Based Award by the per-share cash dividend paid by the Company on its outstanding Company Stock, or the per-share Fair Market Value of any dividend paid on its outstanding Company Stock in consideration other than cash. If interest is credited on accumulated divided equivalents, the term "Dividend Equivalent" shall include the accrued interest.

(k) "Effective Date" shall mean the date on which the registration statement for the initial public offering of the Company Stock is declared effective by the Securities and Exchange Commission and the Company Stock is priced for the initial public offering of such Company Stock, subject to approval of the Plan by the stockholders of the Company.

(l) "Employee" shall mean an employee of the Employer (including an officer or director who is also an employee), but excluding any person who is classified by the Employer as a "contractor" or "consultant," no matter how characterized by the Internal Revenue Service, other governmental agency or a court. Any change of characterization of an individual by the Internal Revenue Service or any court or government agency shall have no effect upon the classification of an individual as an Employee for purposes of this Plan, unless the Committee determines otherwise.

(m) "Employed by, or providing service to, the Employer" shall mean employment or service as an Employee, Key Advisor or member of the Board (so that, for purposes of exercising Options and SARs and satisfying conditions with respect to Stock Awards, Stock Units and Other Stock-Based Awards, a Participant shall not be considered to have terminated employment or service until the Participant ceases to be an Employee, Key Advisor and member of the Board), unless the Committee determines otherwise. If a Participant's relationship is with a subsidiary of the Company and that entity ceases to be a subsidiary of the Company, the Participant will be deemed to cease employment or service when

the entity ceases to be a subsidiary of the Company, unless the Participant transfers employment or service to an Employer.

(n) "Employer" shall mean the Company and its subsidiaries.

(o) "Exchange Act" shall mean the Securities Exchange Act of 1934, as amended.

(p) "Exercise Price" shall mean the per share price at which shares of Company Stock may be purchased under an Option, as designated by the Committee.

(q) "Fair Market Value" shall mean:

(i) If the Company Stock is publicly traded, the Fair Market Value per share shall be determined as follows: (A) if the principal trading market for the Company Stock is a national securities exchange, the closing sales price during regular trading hours on the relevant date or, if there were no trades on that date, the latest preceding date upon which a sale was reported, or (B) if the Company Stock is not principally traded on any such exchange, the last reported sale price of a share of Company Stock during regular trading hours on the relevant date, as reported by the OTC Bulletin Board.

(ii) If the Company Stock is not publicly traded or, if publicly traded, is not subject to reported transactions as set forth above, the Fair Market Value per share shall be determined by the Committee through any reasonable valuation method authorized under the Code.

(iii) If a Grant is made effective on the date that the registration statement for the initial public offering of the Company Stock is declared effective by the Securities and Exchange Commission and the Company Stock is priced for the initial public offering of such Company Stock, then the Fair Market Value per share shall be equal to the per share price of Company Stock offered to the public in such initial public offering.

(r) "GAAP" shall mean United States Generally Accepted Accounting Principles.

(s) "Good Reason" shall have the meaning ascribed to such term in any written employment agreement, offer letter or severance agreement between the Employer and the Participant, or in a severance plan or policy sponsored by the Employer and applicable to the Participant, to the extent applicable. For the avoidance of doubt, if no such agreement, plan or policy applies to the Participant or if such term is not defined therein, then Good Reason shall not apply to the Participant.

(t) "Grant" shall mean an Option, SAR, Stock Award, Stock Unit or Other Stock-Based Award granted under the Plan.

(u) "Grant Instrument" shall mean the written agreement that sets forth the terms and conditions of a Grant, including all amendments thereto.

(v) "Incentive Stock Option" shall mean an Option that is intended to meet the requirements of an incentive stock option under section 422 of the Code.

(w) "Key Advisor" shall mean a consultant or advisor of the Employer.

(x) "Non-Employee Director" shall mean a member of the Board who is not an Employee.

(y) "Nonqualified Stock Option" shall mean an Option that is not intended to be taxed as an incentive stock option under section 422 of the Code.

(z) "Option" shall mean an option to purchase shares of Company Stock, as described in Section 6.

(aa) "Other Stock-Based Award" shall mean any Grant based on, measured by or payable in Company Stock (other than an Option, Stock Unit, Stock Award, or SAR), as described in Section 10.

(bb) "Participant" shall mean an Employee, Key Advisor or Non-Employee Director designated by the Committee to participate in the Plan.

(cc) "Performance Goals" shall mean performance goals that may be based on one or more of the following criteria: cash flow; free cash flow; earnings (including gross margin, earnings before interest and taxes, earnings before taxes, earnings before interest, taxes, depreciation, amortization and charges for stock-based compensation, earnings before interest, taxes, depreciation and amortization, adjusted earnings before interest, taxes, depreciation and amortization and net earnings); earnings per share; growth in earnings or earnings per share; book value growth; stock price; return on equity or average stockholder equity; total stockholder return or growth in total stockholder return either directly or in relation to a comparative group; return on capital; return on assets or net assets; revenue, growth in revenue or return on sales; sales; expense reduction or expense control; expense to revenue ratio; income, net income or adjusted net income; operating income, net operating income, adjusted operating income or net operating income after tax; operating profit or net operating profit; operating margin; gross profit margin; return on operating revenue or return on operating profit; regulatory filings; regulatory approvals, litigation and regulatory resolution goals; other operational, regulatory or departmental objectives; budget comparisons; growth in stockholder value relative to established indexes, or another peer group or peer group index; development and implementation of strategic plans and/or organizational restructuring goals; development and implementation of risk and crisis management programs; improvement in workforce diversity; compliance requirements and compliance relief; safety goals; productivity goals; workforce management and succession planning goals; economic value added (including typical adjustments consistently applied from generally accepted accounting principles required to determine economic value added performance measures); measures of customer satisfaction, employee satisfaction or staff

development; development or marketing collaborations, formations of joint ventures or partnerships or the completion of other similar transactions intended to enhance the Corporation's revenue or profitability or enhance its customer base; merger and acquisitions; and other similar criteria consistent with the foregoing. Performance goals applicable to a Grant shall be determined by the Committee, and may be established on an absolute or relative basis and may be established on a corporate-wide basis or with respect to one or more business units, divisions, subsidiaries or business segments. Relative performance may be measured against a group of peer companies, a financial market index or other objective and quantifiable indices.

(dd) "Plan" shall mean this Replimune Group, Inc. 2018 Omnibus Incentive Compensation Plan, as in effect from time to time.

(ee) "Prior Plan" shall mean Replimune Group, Inc. 2017 Equity Compensation Plan.

(ff) "Restriction Period" shall have the meaning given that term in Section 7(a).

(gg) "SAR" shall mean a stock appreciation right, as described in Section 9.

(hh) "Stock Award" shall mean an award of Company Stock, as described in Section 7.

(ii) "Stock Unit" shall mean an award of a phantom unit representing a share of Company Stock, as described in Section 8.

(jj) "Substitute Awards" shall have the meaning given that term in Section 4(b).

Section 2. Administration

(a) Committee. The Plan shall be administered and interpreted by the Committee; provided, however, that any Grants to members of the Board must be authorized by a majority of the Board. The Committee may delegate authority to one or more subcommittees, as it deems appropriate. Subject to compliance with applicable law and the applicable stock exchange rules, the Board, in its discretion, may perform any action of the Committee hereunder. To the extent that the Board, a subcommittee or the CEO, as described below administers the Plan, references in the Plan to the "Committee" shall be deemed to refer to the Board or such subcommittee or the CEO.

(b) Delegation to CEO. Subject to compliance with applicable law and applicable stock exchange requirements, the Committee may delegate all or part of its authority and power to the CEO, as it deems appropriate, with respect to Grants to Employees or Key Advisors who are not executive officers or directors under section 16 of the Exchange Act.

(c) Committee Authority. The Committee shall have the sole authority to (i) determine the individuals to whom Grants shall be made under the Plan, (ii) determine the type, size, terms and conditions of the Grants to be made to each such individual, (iii) determine the time when the Grants will be made and the duration of any applicable exercise or restriction period, including the criteria for exercisability and the acceleration of exercisability, (v) amend the terms of any previously issued Grant, subject to the provisions of Section 17 below, and (vi) deal with any other matters arising under the Plan.

(d) Committee Determinations. The Committee shall have full power and express discretionary authority to administer and interpret the Plan, to make factual determinations and to adopt or amend such rules, regulations, agreements and instruments for implementing the Plan and for the conduct of its business as it deems necessary or advisable, in its sole discretion. The Committee's interpretations of the Plan and all determinations made by the Committee pursuant to the powers vested in it hereunder shall be conclusive and binding on all persons having any interest in the Plan or in any awards granted hereunder. All powers of the Committee shall be executed in its sole discretion, in the best interest of the Company, not as a fiduciary, and in keeping with the objectives of the Plan and need not be uniform as to similarly situated individuals.

(e) Indemnification. No member of the Committee or the Board, and no employee of the Company shall be liable for any act or failure to act with respect to the Plan, except in circumstances involving his or her bad faith or willful misconduct, or for any act or failure to act hereunder by any other member of the Committee or employee or by any agent to whom duties in connection with the administration of this Plan have been delegated. The Company shall indemnify members of the Committee and the Board and any agent of the Committee or the Board who is an employee of the Company or a subsidiary against any and all liabilities or expenses to which they may be subjected by reason of any act or failure to act with respect to their duties on behalf of the Plan, except in circumstances involving such person's bad faith or willful misconduct.

Section 3. Grants

Grants under the Plan may consist of Options as described in Section 6, Stock Awards as described in Section 7, Stock Units as described in Section 8, SARs as described in Section 9 and Other Stock-Based Awards as described in Section 10. All Grants shall be subject to the terms and conditions set forth herein and to such other terms and conditions consistent with this Plan as the Committee deems appropriate and as are specified in writing by the Committee to the individual in the Grant Instrument. All Grants shall be made conditional upon the Participant's acknowledgement, in writing or by acceptance of the Grant, that all decisions and determinations of the Committee shall be final and binding on the Participant, his or her beneficiaries and any other person having or claiming an interest under such Grant. Grants under a particular Section of the Plan need not be uniform as among the Participants.

Section 4. Shares Subject to the Plan

(a) Shares Authorized. Subject to adjustment as described below in Sections 4(b) and 4(e), the maximum aggregate number of shares of Company Stock that may be issued or transferred under the Plan shall be equal to the sum of the following: (i) 3,486,118 shares, plus (ii) the number of shares of Company Stock reserved for issuance under the Prior Plan that remain available for grant under the Prior Plan as of the Effective Date (not to exceed 131,850 shares of Company Stock). In addition, and subject to adjustment as provided in Sections 4(b) and 4(e) below, shares of Company Stock subject to outstanding grants under the Prior Plan as of the Effective Date that terminate, expire or are cancelled, forfeited, exchanged or surrendered on or after the Effective Date without having been exercised, vested or paid in shares of Company Stock under the Prior Plan prior to the Effective Date (up to 2,520,247 shares) shall be added to the share reserve under the Plan. In addition, as of the first trading day of each fiscal year during the term of the Plan (excluding any extensions), an additional positive number of shares of Company Stock shall be added to the number of shares of Company Stock authorized to be issued or transferred under the Plan, equal to 4% of the total number of shares of Company Stock outstanding on the last trading day in the immediately preceding fiscal year, or such lesser amount as determined by the Board. Subject to adjustment as described below in Sections 4(b) and 4(e), the aggregate number of shares of Company Stock that may be issued or transferred under the Plan pursuant to Incentive Stock Options shall not exceed the lesser of the maximum aggregate number of shares of Company Stock available for issuance or transfer under the Plan and 16,000,000 shares of Company Stock.

(b) Source of Shares; Share Counting. Shares issued or transferred under the Plan may be authorized but unissued shares of Company Stock or reacquired shares of Company Stock, including shares purchased by the Company on the open market for purposes of the Plan. If and to the extent Options or SARs granted under the Plan or options granted under the Prior Plan terminate, expire or are canceled, forfeited, exchanged or surrendered without having been exercised, or if any Stock Awards, Stock Units or Other Stock-Based Awards are forfeited, terminated or otherwise not paid in full, the shares subject to such Grants shall again be available for purposes of the Plan. Shares of Company Stock surrendered in payment of the Exercise Price of an Option (including an option granted under the Prior Plan that is exercised on or after the Effective Date) shall not be available for re-issuance under the Plan. Shares of Company Stock withheld or surrendered for payment of withholding taxes with respect to Grants (including options granted under the Prior Plan) shall not be available for re-issuance under the Plan. If SARs are granted, the full number of shares subject to the SARs shall be considered issued under the Plan, without regard to the number of shares issued upon exercise of the SARs. To the extent any Grants are paid in cash, and not in shares of Company Stock, any shares previously subject to such Grants shall again be available for issuance or transfer under the Plan. For the avoidance of doubt, if shares are repurchased by the Company on the open market with the proceeds of the Exercise Price of Options (including options granted under the Prior Plan), such shares may not again be made available for issuance under the Plan.

(c) Substitute Awards. Shares issued or transferred under Grants made pursuant to an assumption, substitution or exchange for previously granted awards of a company

acquired by the Company in a transaction ("Substitute Awards") shall not reduce the number of shares of Company Stock available under the Plan and available shares under a stockholder approved plan of an acquired company (as appropriately adjusted to reflect the transaction) may be used for Grants under the Plan and shall not reduce the Plan's share reserve (subject to applicable stock exchange listing and Code requirements).

(d) Individual Limits. Subject to adjustment as described below in Section 4(e), the following Grant limitations shall apply:

(i) For Options, SARs, Stock Awards, Stock Units and Other Stock-Based Awards (whether payable in Company Stock, cash or a combination of the two), the maximum number of shares of Company Stock for which such Grants may be made to any Employee or Key Advisor in any calendar year shall not exceed 1,641,235 shares of Company Stock in the aggregate.

(ii) The maximum aggregate grant date value of shares of Company Stock subject to Grants granted to any Non-Employee Director during any calendar year for services rendered as a Non-Employee Director, taken together with any cash fees earned by such Non-Employee Director for services rendered as a Non-Employee Director during the calendar year, shall not exceed $750,000 in total value, provided that the maximum aggregate grant date value of shares of Company Stock subject to Grants granted to any Non-Employee Director during the calendar year in which the Non-Employee Director is first appointed to the Board for services rendered as a Non-Employee Director for such calendar year, taken together with any cash fees earned by such Non-Employee Director for services rendered as a Non-Employee Director during such calendar year, shall not exceed $1,000,000 in total value. For purposes of these limits, the value of such Grants shall be calculated based on the grant date fair value of such Grants for financial reporting purposes.

(e) Adjustments. If there is any change in the number or kind of shares of Company Stock outstanding by reason of (i) a stock dividend, spinoff, recapitalization, stock split, reverse stock split or combination or exchange of shares, (ii) a merger, reorganization or consolidation, (iii) a reclassification or change in par value, or (iv) any other extraordinary or unusual event affecting the outstanding Company Stock as a class without the Company's receipt of consideration, or if the value of outstanding shares of Company Stock is substantially reduced as a result of a spinoff or the Company's payment of an extraordinary dividend or distribution, the maximum number and kind of shares of Company Stock available for issuance under the Plan, the maximum number and kind of shares of Company Stock for which any individual may receive Grants in any year, the number and kind of shares covered by outstanding Grants, the number and kind of shares issued and to be issued under the Plan, and the price per share or the applicable market value of such Grants shall be equitably adjusted by the Committee to reflect any increase or decrease in the number of, or change in the kind or value of, the issued shares of Company Stock to preclude, to the extent practicable, the enlargement or dilution of rights and benefits under the Plan and such outstanding Grants; provided, however, that any fractional shares resulting from such adjustment shall be eliminated. In addition, in the event of a Change of Control, the provisions of Section 12 of the Plan shall apply. Any adjustments to outstanding

Grants shall be consistent with section 409A or 424 of the Code, to the extent applicable. Subject to Section 17(b), the adjustments of Grants under this Section 4(e) shall include adjustment of shares, Exercise Price of Stock Options, base amount of SARs, Performance Goals or other terms and conditions, as the Committee deems appropriate. The Committee shall have the sole discretion and authority to determine what appropriate adjustments shall be made and any adjustments determined by the Committee shall be final, binding and conclusive.

Section 5. Eligibility for Participation

(a) Eligible Persons. All Employees and Non-Employee Directors shall be eligible to participate in the Plan. Key Advisors shall be eligible to participate in the Plan if the Key Advisors render bona fide services to the Employer, the services are not in connection with the offer and sale of securities in a capital-raising transaction and the Key Advisors do not directly or indirectly promote or maintain a market for the Company's securities.

(b) Selection of Participants. The Committee shall select the Employees, Non-Employee Directors and Key Advisors to receive Grants and shall determine the number of shares of Company Stock subject to a particular Grant in such manner as the Committee determines.

Section 6. Options

The Committee may grant Options to an Employee, Non-Employee Director or Key Advisor upon such terms as the Committee deems appropriate. The following provisions are applicable to Options:

(a) Number of Shares. The Committee shall determine the number of shares of Company Stock that will be subject to each Grant of Options to Employees, Non-Employee Directors and Key Advisors.

(b) Type of Option and Exercise Price.

(i) The Committee may grant Incentive Stock Options or Nonqualified Stock Options or any combination of the two, all in accordance with the terms and conditions set forth herein. Incentive Stock Options may be granted only to employees of the Company or its parent or subsidiary corporations, as defined in section 424 of the Code. Nonqualified Stock Options may be granted to Employees, Non-Employee Directors and Key Advisors.

(ii) The Exercise Price of Company Stock subject to an Option shall be determined by the Committee and shall be equal to or greater than the Fair Market Value of a share of Company Stock on the date the Option is granted. However, an Incentive Stock Option may not be granted to an Employee who, at the time of grant, owns stock possessing more than 10% of the total combined voting power of all classes of stock of the Company, or any parent or subsidiary corporation of the Company, as defined in section 424 of the Code, unless the

Exercise Price per share is not less than 110% of the Fair Market Value of a share of Company Stock on the date of grant.

(c) Option Term. The Committee shall determine the term of each Option. The term of any Option shall not exceed ten years from the date of grant. However, an Incentive Stock Option that is granted to an Employee who, at the time of grant, owns stock possessing more than 10% of the total combined voting power of all classes of stock of the Company, or any parent or subsidiary corporation of the Company, as defined in section 424 of the Code, may not have a term that exceeds five years from the date of grant. Notwithstanding the foregoing, in the event that on the last business day of the term of an Option (other than an Incentive Stock Option), the exercise of the Option is prohibited by applicable law, including a prohibition on purchases or sales of Company Stock under the Company's insider trading policy, the term of the Option shall be extended for a period of 30 days following the end of the legal prohibition, unless the Committee determines otherwise.

(d) Exercisability of Options. Options shall become exercisable in accordance with such terms and conditions, consistent with the Plan, as may be determined by the Committee and specified in the Grant Instrument. Subject to the limitations in Section 12, the Committee may accelerate

the exercisability of any or all outstanding Options at any time for any reason.

(e) Grants to Non-Exempt Employees. Notwithstanding the foregoing, Options granted to persons who are non-exempt employees under the Fair Labor Standards Act of 1938, as amended, may not be exercisable for at least six months after the date of grant (except that such Options may become exercisable, as determined by the Committee, upon the Participant's death, Disability or retirement, or upon a Change of Control or other circumstances permitted by applicable regulations).

(f) Termination of Employment or Service. Except as provided in the Grant Instrument, an Option may only be exercised while the Participant is employed by, or providing services to, the Employer. The Committee shall determine in the Grant Instrument under what circumstances and during what time periods a Participant may exercise an Option after termination of employment or service.

(g) Exercise of Options. A Participant may exercise an Option that has become exercisable, in whole or in part, by delivering a notice of exercise to the Company. The Participant shall pay the Exercise Price for an Option as specified by the Committee (i) in cash or by check, (ii) unless the Committee determines otherwise, by delivering shares of Company Stock owned by the Participant and having a Fair Market Value on the date of exercise at least equal to the Exercise Price or by attestation (in accordance with procedures prescribed by the Company) to ownership of shares of Company Stock having a Fair Market Value on the date of exercise at least equal to the Exercise Price, (iii) by payment through a broker in accordance with procedures permitted by Regulation T of the Federal Reserve Board, (iv) if permitted by the Committee, by withholding shares of Company Stock subject to the exercisable Option, which have a Fair Market Value on the date of exercise equal to the Exercise Price, or (v) by such other

method as the Committee may approve. Shares of Company Stock used to exercise an Option shall have been held by the Participant for the requisite period of time necessary to avoid adverse accounting consequences to the Company with respect to the Option. Payment for the shares to be issued or transferred pursuant to the Option, and any required withholding taxes, must be received by the Company by the time specified by the Committee depending on the type of payment being made, but in all cases prior to the issuance or transfer of such shares.

(h) Limits on Incentive Stock Options. Each Incentive Stock Option shall provide that, if the aggregate Fair Market Value of the Company Stock on the date of the grant with respect to which Incentive Stock Options are exercisable for the first time by a Participant during any calendar year, under the Plan or any other stock option plan of the Company or a parent or subsidiary, exceeds $100,000, then the Option, as to the excess, shall be treated as a Nonqualified Stock Option.

Section 7. Stock Awards

The Committee may issue or transfer shares of Company Stock to an Employee, Non-Employee Director or Key Advisor under a Stock Award, upon such terms as the Committee deems appropriate. The following provisions are applicable to Stock Awards:

(a) General Requirements. Shares of Company Stock issued or transferred pursuant to Stock Awards may be issued or transferred for consideration or for no consideration, and subject to restrictions or no restrictions, as determined by the Committee. The Committee may, but shall not be required to, establish conditions under which restrictions on Stock Awards shall lapse over a period of time or according to such other criteria as the Committee deems appropriate, including, without limitation, restrictions based upon the achievement of specific Performance Goals. The period of time during which the Stock Awards will remain subject to restrictions will be designated in the Grant Instrument as the "Restriction Period."

(b) Number of Shares. The Committee shall determine the number of shares of Company Stock to be issued or transferred pursuant to a Stock Award and the restrictions applicable to such shares.

(c) Requirement of Employment or Service. If the Participant ceases to be employed by, or provide service to, the Employer during a period designated in the Grant Instrument as the Restriction Period, or if other specified conditions are not met, the Stock Award shall terminate as to all shares covered by the Grant as to which the restrictions have not lapsed, and those shares of Company Stock must be immediately returned to the Company. Subject to the limitations in Section 12, the Committee may, however, provide for complete or partial exceptions to this requirement as it deems appropriate.

(d) Restrictions on Transfer and Legend on Stock Certificate. During the Restriction Period, a Participant may not sell, assign, transfer, pledge or otherwise dispose of the shares of a Stock Award except under Section 15 below. Unless otherwise determined by the Committee, the Company will retain possession of certificates for shares of Stock Awards until all restrictions on such shares have lapsed. Each certificate for a Stock Award, unless held by

the Company, shall contain a legend giving appropriate notice of the restrictions in the Grant. The Participant shall be entitled to have the legend removed from the stock certificate covering the shares subject to restrictions when all restrictions on such shares have lapsed. The Committee may determine that the Company will not issue certificates for Stock Awards until all restrictions on such shares have lapsed.

(e) Right to Vote and to Receive Dividends. Unless the Committee determines otherwise, during the Restriction Period, the Participant shall have the right to vote shares of Stock Awards and to receive any dividends or other distributions paid on such shares, subject to any restrictions deemed appropriate by the Committee, including, without limitation, the achievement of specific Performance Goals. Dividends with respect to Stock Awards that vest based on performance shall vest if and to the extent that the underlying Stock Award vests, as determined by the Committee.

(f) Lapse of Restrictions. All restrictions imposed on Stock Awards shall lapse upon the expiration of the applicable Restriction Period and the satisfaction of all conditions, if any, imposed by the Committee. The Committee may determine, as to any or all Stock Awards, that the restrictions shall lapse without regard to any Restriction Period.

Section 8. Stock Units

The Committee may grant Stock Units, each of which shall represent one hypothetical share of Company Stock, to an Employee, Non-Employee Director or Key Advisor upon such terms and conditions as the Committee deems appropriate. The following provisions are applicable to Stock Units:

(a) Crediting of Units. Each Stock Unit shall represent the right of the Participant to receive a share of Company Stock or an amount of cash based on the value of a share of Company Stock, if and when specified conditions are met. All Stock Units shall be credited to bookkeeping accounts established on the Company's records for purposes of the Plan.

(b) Terms of Stock Units. The Committee may grant Stock Units that vest and are payable if specified Performance Goals or other conditions are met, or under other circumstances. Stock Units may be paid at the end of a specified performance period or other period, or payment may be deferred to a date authorized by the Committee. Subject to the limitations set forth in Section 12, the Committee may accelerate vesting or payment, as to any or all Stock Units at any time for any reason, provided such acceleration complies with section 409A of the Code. The Committee shall determine the number of Stock Units to be granted and the requirements applicable to such Stock Units.

(c) Requirement of Employment or Service. If the Participant ceases to be employed by, or provide service to, the Employer prior to the vesting of Stock Units, or if other conditions established by the Committee are not met, the Participant's Stock Units shall be forfeited. The Committee may, however, provide for complete or partial exceptions to this requirement as it deems appropriate.

(d) Payment With Respect to Stock Units. Payments with respect to Stock Units shall be made in cash, Company Stock or any combination of the foregoing, as the Committee shall determine.

Section 9. Stock Appreciation Rights

The Committee may grant SARs to an Employee, Non-Employee Director or Key Advisor separately or in tandem with any Option. The following provisions are applicable to SARs:

(a) General Requirements. The Committee may grant SARs to an Employee, Non-Employee Director or Key Advisor separately or in tandem with any Option (for all or a portion of the applicable Option). Tandem SARs may be granted either at the time the Option is granted or at any time thereafter while the Option remains outstanding; provided, however, that, in the case of an Incentive Stock Option, SARs may be granted only at the time of the grant of the Incentive Stock Option. The Committee shall establish the base amount of the SAR at the time the SAR is granted. The base amount of each SAR shall be equal to or greater than the Fair Market Value of a share of Company Stock as of the date of grant of the SAR. The term of any SAR shall not exceed ten years from the date of grant. Notwithstanding the foregoing, in the event that on the last business day of the term of a SAR, the exercise of the SAR is prohibited by applicable law, including a prohibition on purchases or sales of Company Stock under the Company's insider trading policy, the term shall be extended for a period of 30 days following the end of the legal prohibition, unless the Committee determines otherwise.

(b) Tandem SARs. In the case of tandem SARs, the number of SARs granted to a Participant that shall be exercisable during a specified period shall not exceed the number of shares of Company Stock that the Participant may purchase upon the exercise of the related Option during such period. Upon the exercise of an Option, the SARs relating to the Company Stock covered by such Option shall terminate. Upon the exercise of SARs, the related Option shall terminate to the extent of an equal number of shares of Company Stock.

(c) Exercisability. An SAR shall be exercisable during the period specified by the Committee in the Grant Instrument and shall be subject to such vesting and other restrictions as may be specified in the Grant Instrument. Subject to the limitations set forth in Section 12, the Committee may accelerate the exercisability of any or all outstanding SARs at any time for any reason. SARs may only be exercised while the Participant is employed by, or providing service to, the Employer or during the applicable period after termination of employment or service as specified by the Committee. A tandem SAR shall be exercisable only during the period when the Option to which it is related is also exercisable.

(d) Grants to Non-Exempt Employees. Notwithstanding the foregoing, SARs granted to persons who are non-exempt employees under the Fair Labor Standards Act of 1938, as amended, may not be exercisable for at least six months after the date of grant (except that such SARs may become exercisable, as determined by the Committee, upon the Participant's

death, Disability or retirement, or upon a Change of Control or other circumstances permitted by applicable regulations).

(e) Value of SARs. When a Participant exercises SARs, the Participant shall receive in settlement of such SARs an amount equal to the value of the stock appreciation for the number of SARs exercised. The stock appreciation for an SAR is the amount by which the Fair Market Value of the underlying Company Stock on the date of exercise of the SAR exceeds the base amount of the SAR as described in subsection (a).

(f) Form of Payment. The appreciation in an SAR shall be paid in shares of Company Stock, cash or any combination of the foregoing, as the Committee shall determine. For purposes of calculating the number of shares of Company Stock to be received, shares of Company Stock shall be valued at their Fair Market Value on the date of exercise of the SAR.

Section 10. Other Stock-Based Awards

The Committee may grant Other Stock-Based Awards, which are awards (other than those described in Sections 6, 7, 8 and 9 of the Plan) that are based on or measured by Company Stock, to any Employee, Non-Employee Director or Key Advisor, on such terms and conditions as the Committee shall determine. Other Stock-Based Awards may be awarded subject to the achievement of Performance Goals or other criteria or other conditions and may be payable in cash, Company Stock or any combination of the foregoing, as the Committee shall determine.

Section 11. Dividend Equivalents

The Committee may grant Dividend Equivalents in connection with Stock Units or Other Stock-Based Awards. Dividend Equivalents may be paid currently or accrued as contingent cash obligations and may be payable in cash or shares of Company Stock, and upon such terms and conditions as the Committee shall determine. Dividend Equivalents with respect to Stock Units or Other Stock-Based Awards that vest based on performance shall vest and be paid only if and to the extent the underlying Stock Units or Other Stock-Based Awards vest and are paid, as determined by the Committee. For the avoidance of doubt, no dividends or Dividend Equivalents will be granted in connection with Stock Options or SARs.

Section 12. Consequences of a Change of Control

(a) Assumption of Outstanding Grants. Upon a Change of Control where the Company is not the surviving corporation (or survives only as a subsidiary of another corporation), all outstanding Grants that are not exercised or paid at the time of the Change of Control shall be assumed by, or replaced with grants that have comparable terms by, the surviving corporation (or a parent or subsidiary of the surviving corporation). In the event that the surviving corporation (or a parent or subsidiary of the surviving corporation) does not assume or replace Grants with grants that have comparable terms, outstanding Stock Options and SARs shall automatically accelerate and become fully exercisable and the restrictions and conditions on outstanding Stock Awards, Stock Units, Other Stock-Based Awards and Dividend Equivalents shall immediately lapse; provided that if the vesting of any such Grants is based, in whole or in

part, on performance, the applicable Grant Instrument shall specify how the portion of the Grant that becomes vested pursuant to this Section 12(a) shall be calculated. After a Change of Control, references to the "Company" as they relate to employment matters shall include the successor employer in the transaction, subject to applicable law.

(b) Vesting Upon Certain Terminations of Employment. If Grants are assumed by, or replaced with grants that have comparable terms by, the surviving corporation (or a parent or subsidiary of the surviving corporation) and if a Participant's employment or service is terminated by the Employer without Cause or by the Participant for Good Reason (if applicable) upon or within 12 months following a Change of Control, the Participant's outstanding Grants shall become fully vested as of the date of such termination; provided that if the vesting of any such Grants is based, in whole or in part, on performance, the applicable Grant Instrument shall specify how the portion of the Grant that becomes vested pursuant to this Section 12(b) shall be calculated. Notwithstanding the foregoing in this Section 12(b), the Committee may provide for more beneficial vesting terms upon a termination of employment in connection with a Change of Control, as set forth in the applicable Grant Instrument or otherwise.

(c) Other Alternatives. In the event of a Change of Control, if any outstanding Grants are not assumed by, or replaced with grants that have comparable terms by, the surviving corporation (or a parent or subsidiary of the surviving corporation), the Committee may take any of the following actions with respect to any or all outstanding Grants, without the consent of any Participant: (i) the Committee may determine that Participants shall receive a payment in settlement of outstanding Stock Units, Other Stock-Based Awards or Dividend Equivalents, in such amount and form as may be determined by the Committee; (ii) the Committee may require that Participants surrender their outstanding Stock Options and SARs in exchange for a payment by the Company, in cash or Company Stock as determined by the Committee, in an amount equal to the amount, if any, by which the then Fair Market Value of the shares of Company Stock subject to the Participant's unexercised Stock Options and SARs exceeds the Stock Option Exercise Price or SAR base amount, and (iii) after giving Participants an opportunity to exercise all of their outstanding Stock Options and SARs, the Committee may terminate any or all unexercised Stock Options and SARs at such time as the Committee deems appropriate. Such surrender, termination or payment shall take place as of the date of the Change of Control or such other date as the Committee may specify. Without limiting the foregoing, if the per share Fair Market Value of the Company Stock does not exceed the per share Stock Option Exercise Price or SAR base amount, as applicable, the Company shall not be required to make any payment to the Participant upon surrender of the Stock Option or SAR.

Section 13. Deferrals

The Committee may permit or require a Participant to defer receipt of the payment of cash or the delivery of shares that would otherwise be due to such Participant in connection with any Grant. If any such deferral election is permitted or required, the Committee shall establish rules and procedures for such deferrals and may provide for interest or other earnings to be paid

on such deferrals. The rules and procedures for any such deferrals shall be consistent with applicable requirements of section 409A of the Code.

Section 14. Withholding of Taxes

(a) Required Withholding. All Grants under the Plan shall be subject to applicable United States federal (including FICA), state and local, foreign country or other tax withholding requirements. The Employer may require that the Participant or other person receiving Grants or exercising Grants pay to the Employer an amount sufficient to satisfy such tax withholding requirements with respect to such Grants, or the Employer may deduct from other wages and compensation paid by the Employer the amount of any withholding taxes due with respect to such Grants.

(b) Share Withholding. The Committee may permit or require the Employer's tax withholding obligation with respect to Grants paid in Company Stock to be satisfied by having shares withheld up to an amount that does not exceed the Participant's applicable withholding tax rate for United States federal (including FICA), state and local, foreign country or other tax liabilities. The Committee may, in its discretion, and subject to such rules as the Committee may adopt, allow Participants to elect to have such share withholding applied to all or a portion of the tax withholding obligation arising in connection with any particular Grant. Unless the Committee determines otherwise, share withholding for taxes shall not exceed the Participant's minimum applicable tax withholding amount.

Section 15. Transferability of Grants

(a) Nontransferability of Grants. Except as described in subsection (b) below, only the Participant may exercise rights under a Grant during the Participant's lifetime. A Participant may not transfer those rights except (i) by will or by the laws of descent and distribution or (ii) with respect to Grants other than Incentive Stock Options, pursuant to a domestic relations order. When a Participant dies, the personal representative or other person

entitled to succeed to the rights of the Participant may exercise such rights. Any such successor must furnish proof satisfactory to the Company of his or her right to receive the Grant under the Participant's will or under the applicable laws of descent and distribution.

(b) Transfer of Nonqualified Stock Options. Notwithstanding the foregoing, the Committee may provide, in a Grant Instrument, that a Participant may transfer Nonqualified Stock Options to family members, or one or more trusts or other entities for the benefit of or owned by family members, consistent with the applicable securities laws, according to such terms as the Committee may determine; provided that the Participant receives no consideration for the transfer of an Option and the transferred Option shall continue to be subject to the same terms and conditions as were applicable to the Option immediately before the transfer.

Section 16. Requirements for Issuance or Transfer of Shares

No Company Stock shall be issued or transferred in connection with any Grant hereunder unless and until all legal requirements applicable to the issuance or transfer of such Company

Stock have been complied with to the satisfaction of the Committee. The Committee shall have the right to condition any Grant on the Participant's undertaking in writing to comply with such restrictions on his or her subsequent disposition of the shares of Company Stock as the Committee shall deem necessary or advisable, and certificates representing such shares may be legended to reflect any such restrictions. Certificates representing shares of Company Stock issued or transferred under the Plan may be subject to such stop-transfer orders and other restrictions as the Committee deems appropriate to comply with applicable laws, regulations and interpretations, including any requirement that a legend be placed thereon.

Section 17. Amendment and Termination of the Plan

(a) Amendment. The Board may amend or terminate the Plan at any time; provided, however, that the Board shall not amend the Plan without stockholder approval if such approval is required in order to comply with the Code or other applicable law, or to comply with applicable stock exchange requirements.

(b) No Repricing of Options or SARs. Except in connection with a corporate transaction involving the Company (including, without limitation, any stock dividend, distribution (whether in the form of cash, Company Stock, other securities or property), stock split, extraordinary cash dividend, recapitalization, change in control, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase or exchange of shares of Company Stock or other securities, or similar transactions), the Company may not, without obtaining stockholder approval, (i) amend the terms of outstanding Stock Options or SARs to reduce the Exercise Price of such outstanding Stock Options or base price of such SARs, (ii) cancel outstanding Stock Options or SARs in exchange for Stock Options or SARs with an Exercise Price or base price, as applicable, that is less than the Exercise Price or base price of the original Stock Options or SARs or (iii) cancel outstanding Stock Options or SARs with an Exercise Price or base price, as applicable, above the current stock price in exchange for cash or other securities.

(c) Termination of Plan. The Plan shall terminate on the day immediately preceding the tenth anniversary of its Effective Date, unless the Plan is terminated earlier by the Board or is extended by the Board with the approval of the stockholders.

(d) Termination and Amendment of Outstanding Grants. A termination or amendment of the Plan that occurs after a Grant is made shall not materially impair the rights of a Participant unless the Participant consents or unless the Committee acts under Section 18(f) below. The termination of the Plan shall not impair the power and authority of the Committee with respect to an outstanding Grant. Whether or not the Plan has terminated, an outstanding Grant may be terminated or amended under Section 18(f) below or may be amended by agreement of the Company and the Participant consistent with the Plan; provided that, the Participant's consent is not required if any termination or amendment to the Participant's outstanding Grant does not materially impair the rights or materially increase the obligations of the Participant.

Section 18. Miscellaneous

(a) Grants in Connection with Corporate Transactions and Otherwise. Nothing contained in the Plan shall be construed to (i) limit the right of the Committee to make Grants under the Plan in connection with the acquisition, by purchase, lease, merger, consolidation or otherwise, of the business or assets of any corporation, firm or association, including Grants to employees thereof who become Employees, or (ii) limit the right of the Company to grant stock options or make other awards outside of the Plan. The Committee may make a Grant to an employee of another corporation who becomes an Employee by reason of a corporate merger, consolidation, acquisition of stock or property, reorganization or liquidation involving the Company, in substitution for a stock option or stock award granted by such corporation. Notwithstanding anything in the Plan to the contrary, the Committee may establish such terms and conditions of the new Grants as it deems appropriate, including setting the Exercise Price of Options or the base price of SARs at a price necessary to retain for the Participant the same economic value as the prior options or rights.

(b) Governing Document. The Plan shall be the controlling document. No other statements, representations, explanatory materials or examples, oral or written, may amend the Plan in any manner. The Plan shall be binding upon and enforceable against the Company and its successors and assigns.

(c) Funding of the Plan. The Plan shall be unfunded. The Company shall not be required to establish any special or separate fund or to make any other segregation of assets to assure the payment of any Grants under the Plan.

(d) Rights of Participants. Nothing in the Plan shall entitle any Employee, Non-Employee Director, Key Advisor or other person to any claim or right to receive a Grant under the Plan. Neither the Plan nor any action taken hereunder shall be construed as giving any individual any rights to be retained by or in the employ of the Employer or any other employment rights.

(e) No Fractional Shares. No fractional shares of Company Stock shall be issued or delivered pursuant to the Plan or any Grant. Except as otherwise provided under the Plan, the Committee shall determine whether cash, other awards or other property shall be issued or paid in lieu of such fractional shares or whether such fractional shares or any rights thereto shall be forfeited or otherwise eliminated.

(f) Compliance with Law.

(i) The Plan, the exercise of Options and SARs and the obligations of the Company to issue or transfer shares of Company Stock under Grants shall be subject to all applicable laws and regulations, and to approvals by any governmental or regulatory agency as may be required. With respect to persons subject to section 16 of the Exchange Act, it is the intent of the Company that the Plan and all transactions under the Plan comply with all applicable provisions of Rule 16b-3 or its successors under the Exchange Act. In addition, it is

the intent of the Company that Incentive Stock Options comply with the applicable provisions of section 422 of the Code, and that, to the extent applicable, Grants comply with the requirements of section 409A of the Code. To the extent that any legal requirement of section 16 of the Exchange Act or section 422 or 409A of the Code as set forth in the Plan ceases to be required under section 16 of the Exchange Act or section 422 or 409A of the Code, that Plan provision shall cease to apply. The Committee may revoke any Grant if it is contrary to law or modify a Grant to bring it into compliance with any valid and mandatory government regulation. The Committee may also adopt rules regarding the withholding of taxes on payments to Participants. The Committee may, in its sole discretion, agree to limit its authority under this Section.

(ii) The Plan is intended to comply with the requirements of section 409A of the Code, to the extent applicable. Each Grant shall be construed and administered such that the Grant either (A) qualifies for an exemption from the requirements of section 409A of the Code or (B) satisfies the requirements of section 409A of the Code. If a Grant is subject to section 409A of the Code, (I) distributions shall only be made in a manner and upon an event permitted under section 409A of the Code, (II) payments to be made upon a termination of employment or service shall only be made upon a "separation from service" under section 409A of the Code, (III) unless the Grant specifies otherwise, each installment payment shall be treated as a separate payment for purposes of section 409A of the Code, and (IV) in no event shall a Participant, directly or indirectly, designate the calendar year in which a distribution is made except in accordance with section 409A of the Code.

(iii) Any Grant that is subject to section 409A of the Code and that is to be distributed to a Key Employee (as defined below) upon separation from service shall be administered so that any distribution with respect to such Grant shall be postponed for six months following the date of the Participant's separation from service, if required by section 409A of the Code. If a distribution is delayed pursuant to section 409A of the Code, the distribution shall be paid within 15 days after the end of the six-month period. If the Participant dies during such six-month period, any postponed amounts shall be paid within 90 days of the Participant's death. The determination of Key Employees, including the number and identity of persons considered Key Employees and the identification date, shall be made by the Committee or its delegate each year in accordance with section 416(i) of the Code and the "specified employee" requirements of section 409A of the Code.

(iv) Notwithstanding anything in the Plan or any Grant agreement to the contrary, each Participant shall be solely responsible for the tax consequences of Grants under the Plan, and in no event shall the Company or any subsidiary or affiliate of the Company have any responsibility or liability if a Grant does not meet any applicable requirements of section 409A of the Code. Although the Company intends to administer the Plan to prevent taxation under section 409A of the Code, the Company does not represent or warrant that the Plan or any Grant complies with any provision of federal, state, local or other tax law.

(g) Establishment of Subplans. The Board may from time to time establish one or more sub-plans under the Plan for purposes of satisfying applicable blue sky, securities or tax laws of various jurisdictions. The Board shall establish such sub-plans by adopting

supplements to the Plan setting forth (i) such limitations on the Committee's discretion under the Plan as the Board deems necessary or desirable and (ii) such additional terms and conditions not otherwise inconsistent with the Plan as the Board shall deem necessary or desirable. All supplements adopted by the Board shall be deemed to be part of the Plan, but each supplement shall apply only to Participants within the affected jurisdiction and the Employer shall not be required to provide copies of any supplement to Participants in any jurisdiction that is not affected.

(h) Clawback Rights. Subject to the requirements of applicable law, the Committee may provide in any Grant Instrument that, if a Participant breaches any restrictive covenant agreement between the Participant and the Employer (which may be set forth in any Grant Instrument) or otherwise engages in activities that constitute Cause either while employed by, or providing service to, the Employer or within a specified period of time thereafter, all Grants held by the Participant shall terminate, and the Company may rescind any exercise of an Option or SAR and the vesting of any other Grant and delivery of shares upon such exercise or vesting (including pursuant to dividends and Dividend Equivalents), as applicable on such terms as the Committee shall determine, including the right to require that in the event of any such rescission, (i) the Participant shall return to the Company the shares received upon the exercise of any Option or SAR and/or the vesting and payment of any other Grant (including pursuant to dividends and Dividend Equivalents) or, (ii) if the Participant no longer owns the shares, the Participant shall pay to the Company the amount of any gain realized or payment received as a result of any sale or other disposition of the shares (or, in the event the Participant transfers the shares by gift or otherwise without consideration, the Fair Market Value of the shares on the date of the breach of the restrictive covenant agreement (including a Participant's Grant Instrument containing restrictive covenants) or activity constituting Cause), net of the price originally paid by the Participant for the shares. Payment by the Participant shall be made in such manner and on such terms and conditions as may be required by the Committee. The Employer shall be entitled to set off against the amount of any such payment any amounts otherwise owed to the Participant by the Employer. In addition, all Grants under the Plan shall be subject to any applicable clawback or recoupment policies, share trading policies and other policies that may be implemented by the Board from time to time.

(i) Governing Law. The validity, construction, interpretation and effect of the Plan and Grant Instruments issued under the Plan shall be governed and construed by and determined in accordance with the laws of the State of Delaware, without giving effect to the conflict of laws provisions thereof.

REPLIMUNE GROUP, INC.
2018 OMNIBUS INCENTIVE COMPENSATION PLAN
NONQUALIFIED STOCK OPTION GRANT AGREEMENT

This NONQUALIFIED STOCK OPTION GRANT AGREEMENT (the "Agreement"), dated as of (the "Date of Grant"), is delivered by Replimune Group, Inc. (the "Company") to (the "Participant").

RECITALS

The Replimune Group, Inc. 2018 Omnibus Incentive Compensation Plan and the Sub-Plan for U.K. Employees thereunder (together, the "Plan") provides for the grant of stock options to purchase shares of common stock of the Company ("Company Stock"). The Committee has decided to make this nonqualified stock option grant as an inducement for the Participant to promote the best interests of the Company and its stockholders. The Participant hereby acknowledges the receipt of a copy of the official prospectus for the Plan, which is available by accessing the Company's intranet at **[Insert link]**. Paper copies of the Plan and the official Plan prospectus are available by contacting **[Insert title]** of the Company at **[Insert phone number]** or **[Insert email address]**. This Agreement is made pursuant to the Plan and is subject in its entirety to all applicable provisions of the Plan. Capitalized terms used herein and not otherwise defined will have the meanings set forth in the Plan.

1. Grant of Option. Subject to the terms and conditions set forth in this Agreement and in the Plan, the Company hereby grants to the Participant a stock option, which is a nonqualified stock option for U.S. federal tax purposes (the "Option") to purchase shares of Company Stock ("Shares") at an Exercise Price of $ per Share. The Option shall become exercisable according to Section 2 below.

2. Exercisability of Option.

(a) The Option shall become vested and exercisable on the following dates (each, a "Vesting Date"), provided that the Participant continues to be employed by, or provide service to, the Employer from the Date of Grant until the applicable Vesting Date:

Vesting Date	**[Percentage of] Shares for Which the Option is Exercisable as of the Vesting Date**

(b) The vesting and exercisability of the Option is cumulative, but shall not exceed 100% of the Shares subject to the Option. **[If the foregoing schedule would produce fractional Shares, the number of Shares for which the Option becomes vested and exercisable shall be rounded down to the nearest whole Share and the fractional Shares will**

be accumulated so that the resulting whole Shares will be included in the number of Shares for which the Option becomes vested and exercisable on the last Vesting Date.]

(c) In the event of a Change of Control, the provisions of the Plan applicable to a Change of Control shall apply to the Option, and, in the event of a Change of Control, the Committee may take such actions as it deems appropriate pursuant to the Plan.

In addition, if the Company is not the surviving corporation (or survives only as a subsidiary of another corporation) as a result of the Change of Control and the Option is assumed by, or replaced with an award with comparable terms by, the surviving corporation (or parent or subsidiary of the surviving corporation) and the Participant's employment or service is terminated by the Employer without Cause or by the Participant for Good Reason (if applicable) upon or within 12 months following a Change of Control and before the Option is fully vested and exercisable in accordance with the vesting schedule set forth in Section 2(a) above, any unvested and unexercisable portion of the Option shall become fully vested and exercisable upon such termination of employment or service. In the event that the surviving corporation (or a parent or subsidiary of the surviving corporation) does not assume or replace the Option with a grant that has comparable terms, and the Participant is employed by, or providing services to, the Employer on the date of the Change of Control, any unvested and unexercisable portion of the Option shall become fully vested and exercisable upon the date of the Change of Control.

(d) For purposes of this Agreement, the Participant's employment or service will be deemed to terminate on the date that the Participant ceases to be actively employed by, or providing services to, the Employer and shall not be extended by any notice period mandated or implied under local law (i) during or for which the Participant receives pay in lieu of notice or severance pay or is on garden or similar leave or (ii) during which the Participant remains employed or providing services, but is not actively working. The Company shall have the sole discretion to determine when the Participant is no longer in active employment or service for purposes of this Agreement, without reference to any other agreement, written or oral, including the Participant's contract of employment or service.

(e) The exercisability of the Option pursuant to this Section 2 shall be subject in all respects to the exercise procedures and requirements set forth in Section 4 below.

3. Term of Option.

(a) The Option shall have a term of ten years from the Date of Grant and shall terminate at the expiration of that period, unless it is terminated at an earlier date pursuant to the provisions of this Agreement or the Plan. Notwithstanding the foregoing, in the event that on the last business day of the term of the Option, the exercise of the Option is prohibited by applicable law, including a prohibition on purchases or sales of Company Stock under the Company's insider trading policy, the term of the Option shall be extended for a period of 30 days following the end of the legal prohibition, unless the Committee determines otherwise or otherwise prohibited under applicable law.

(b) The Option shall automatically terminate upon the happening of the first of the following events:

(i) The expiration of the 90-day period after the Participant ceases to be employed by, or provide service to, the Employer, if the termination is for any reason other than Disability, death or Cause.

(ii) The expiration of the one-year period after the Participant ceases to be employed by, or provide service to, the Employer on account of the Participant's Disability.

(iii) The expiration of the one-year period after the Participant ceases to be employed by, or provide service to, the Employer, if the Participant dies while employed by, or providing service to, the Employer or the Participant dies within 90 days after the Participant ceases to be so employed or to provide services to the Employer for any reason other than Disability, death or Cause.

(iv) The date on which the Participant ceases to be employed by, or provide service to, the Employer for Cause. In addition, notwithstanding the prior provisions of this Section 3, if the Participant engages in conduct that constitutes Cause after the Participant's employment or service terminates, the Option shall immediately terminate.

Notwithstanding the foregoing, in no event may the Option be exercised after the date that is immediately before the tenth anniversary of the Date of Grant, except as provided under Section 3(a) above. Any portion of the Option that is not exercisable at the time the Participant ceases to be employed by, or provide service to, the Employer shall immediately terminate.

4. Exercise Procedures.

(a) Subject to the provisions of Sections 2 and 3 above, the Participant may exercise part or all of the exercisable Option by giving the Company or its delegate written notice of intent to exercise, specifying the number of Shares as to which the Option is to be exercised and such other information as the Company or its delegate may require.

The Participant shall pay the Exercise Price (i) in cash or check, (ii) unless the Committee determines otherwise, by delivering shares of Company Stock owned by the Participant, which shall be valued at their Fair Market Value on the date of exercise, or by attestation (in accordance with procedures prescribed by the Company) to ownership of shares of Company Stock having a Fair Market Value on the date of exercise at least equal to the Exercise Price, (iii) if permitted by the Committee, by payment through a broker in accordance with procedures permitted by Regulation T of the Federal Reserve Board, or (iv)

by such other method as the Committee may approve, to the extent permitted by applicable law. The Committee may impose from time to time such limitations as it deems appropriate on the use of shares of Company Stock to exercise the Option.

(b) The obligation of the Company to deliver Shares upon exercise of the Option shall be subject to all applicable laws, rules, and regulations and such approvals by governmental agencies as may be deemed appropriate by the Committee, including such actions as Company counsel shall deem necessary or appropriate to comply with relevant securities laws and regulations.

(c) All obligations of the Company under this Agreement shall be subject to the rights of the Employer as set forth in the Plan to withhold amounts required to be withheld, collected or accounted for with respect to any income tax (including U.S. federal, state, and local tax and/or foreign income tax), employment tax (including FICA), payroll tax, social security tax, social insurance, national insurance and other contributions, payment on account obligations, national and local tax or other amounts required to be withheld, collected or accounted for by the Employer in connection with any taxable event with respect to the Option (the "Withholding Taxes"), if applicable. The Participant shall be required to pay to the Employer, or make other arrangements satisfactory to the Employer to provide for the payment of Withholding Taxes.

(d) Regardless of any action the Employer takes with respect to any such Withholding Taxes, the Participant acknowledges that the ultimate liability for all such Withholding Taxes legally due by the Participant is and remains the Participant's responsibility and may exceed the amount withheld by the Employer. The Participant further acknowledges that the Employer (i) makes no representations or undertakings regarding the treatment of any Withholding Taxes in connection with any aspect of the Option, including the grant, vesting or exercise of the Option and the subsequent sale of any Shares acquired upon exercise; and (ii) does not commit to, and is under no obligation to, structure the terms of the grant or any aspect of the Option to reduce or eliminate the Participant's liability for Withholding Taxes. Further, if the Participant has become subject to tax in more than one jurisdiction between the date of grant and the date of any relevant taxable event, then the Participant acknowledges that the Employer

may be required to collect, withhold or account for Withholding Taxes in more than one jurisdiction.

(e) Employer NICs. As a condition to participation in the Plan and the exercise of the Option, the Participant hereby agrees to accept all liability for and pay all secondary Class 1 National Insurance Contributions which would otherwise be payable by the Company (or any successor or any subsidiary employing or retaining or previously employing or retaining the Participant) with respect to the exercise of the Option or any other event giving rise to taxation in respect of the Option (the "Employer NICs"). The Participant agrees that to the extent requested by the Company, the Participant will execute, within the time period specified by the Company, a joint election and any other consent or elections required to effect the transfer of the Employer NICs. The Participant further agrees to execute such other joint elections as may be required between the Participant and any successor to the Company

and/or the Participant's employer. The Participant further agrees that the Company and/or the Participant's employer may collect the Employer NICs by any of the means set forth in this Agreement.

(f) Upon exercise of the Option (or portion thereof), the Option (or portion thereof) will terminate and cease to be outstanding.

5. Restrictions on Exercise. Except as the Committee may otherwise permit pursuant to the Plan, only the Participant may exercise the Option during the Participant's lifetime and, after the Participant's death, the Option shall be exercisable (subject to the limitations specified in the Plan) solely by the legal representatives of the Participant, or by the person who acquires the right to exercise the Option by will or by the laws of descent and distribution, to the extent that the Option is exercisable pursuant to this Agreement.

6. Grant Subject to Plan Provisions. This grant is made pursuant to the Plan, the terms of which are incorporated herein by reference, and in all respects shall be interpreted in accordance with the Plan. The grant and exercise of the Option are subject to the provisions of the Plan and to interpretations, regulations and determinations concerning the Plan established from time to time by the Committee in accordance with the provisions of the Plan, including, but not limited to, provisions pertaining to (a) rights and obligations with respect to withholding taxes, (b) the registration, qualification or listing of the Shares, (c) changes in capitalization of the Company and (d) other requirements of applicable law. The Committee may amend the terms of this

Option to the extent permitted by the Plan. The Committee shall have the authority to interpret and construe the Option pursuant to the terms of the Plan, and its decisions shall be conclusive as to any questions arising hereunder.

7. No Employment or Other Rights. The grant of the Option shall not confer upon the Participant any right to be retained by or in the employ or service of any Employer and shall not interfere in any way with the right of any Employer to terminate the Participant's employment or service at any time. Subject to the terms of any employment agreement between the Participant and the Employer and applicable law, the right of any Employer to terminate at will the Participant's employment or service at any time for any reason is specifically reserved.

8. No Stockholder Rights. Neither the Participant, nor any person entitled to exercise the Participant's rights in the event of the Participant's death, shall have any of the rights and privileges of a stockholder with respect to the Shares subject to the Option, until certificates for Shares have been issued upon the exercise of the Option.

9. Assignment and Transfers. Except as the Committee may otherwise permit pursuant to the Plan, the rights and interests of the Participant under this Agreement may not be sold, assigned, encumbered or otherwise transferred except, in the event of the death of the Participant, by will or by the laws of descent and distribution. In the event of any attempt by the Participant to alienate, assign, pledge, hypothecate, or otherwise dispose of the Option or any right hereunder, except as provided for in this Agreement, or in the event of the levy or any attachment, execution or similar process upon the rights or interests hereby conferred, the Company may terminate the Option by notice to the Participant, and the Option and all rights hereunder shall thereupon become null and void. The rights and protections of the Company hereunder shall extend to any successors or assigns of the Company and to the Company's parents, subsidiaries, and affiliates. This Agreement may be assigned by the Company without the Participant's consent.

10. Applicable Law. The validity, construction, interpretation and effect of this Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to the conflicts of laws provisions thereof.

11. Notice. Any notice to the Company provided for in this instrument shall be addressed to the Company in care of the [ ] at the corporate headquarters of the Company, and any notice to the Participant shall be addressed to such Participant at the current address shown on the payroll of the Employer, or to such other address as the Participant may designate to the Employer in writing. Any notice shall be delivered by hand or enclosed in a properly sealed envelope addressed as stated above, registered and deposited, postage prepaid, in a post office regularly maintained by the United States Postal Service or by the postal authority of the country in which the Participant resides or to an internationally recognized expedited mail courier.

12. Company Policies. The Participant agrees that payment by the Participant shall be made in such manner and on such terms and conditions as may be required by the Committee and the Employer shall be entitled to set off against the amount of any such payment any amounts otherwise owed to the Participant by the Employer. In addition, the Participant agrees that the

Option shall be subject to any applicable clawback or recoupment policies, share trading policies and other policies that may be implemented by the Board or imposed under applicable rule or regulation from time to time.

13. Application of Section 409A of the Code. This Agreement is intended to be exempt from section 409A of the Code and to the extent this Agreement is subject to section 409A of the Code, it will in all respects be administered in accordance with section 409A of the Code.

14. No Entitlement or Claims for Compensation. In connection with the acceptance of the grant of the Option under this Agreement, the Participant acknowledges the following:

(a) the Plan is established voluntarily by the Company, the grant of the Option under the Plan is made at the discretion of the Committee and the Plan may be modified, amended, suspended or terminated by the Company at any time;

(b) the grant of the Option under the Plan is voluntary and occasional and does not create any contractual or other right to receive future grants of equity awards, or benefits in lieu of them, even if equity awards have been granted repeatedly in the past;

(c) all decisions with respect to future grants of awards, if any, will be at the sole discretion of the Committee;

(d) the Participant is voluntarily participating in the Plan;

(e) the Option and any Shares acquired under the Plan are extraordinary items that do not constitute compensation of any kind for services of any kind rendered to the Employer and which are outside the scope of the Participant's employment contract, if any;

(f) the Option and any Shares acquired under the Plan are not to be considered part of the Participant's normal or expected compensation or salary for any purpose, including, but not limited to, calculating any severance, resignation, termination, payment in lieu of notice, redundancy, end of service payments, bonuses, long-service awards, pension or retirement or welfare benefits or similar payments;

(g) the Option and the Shares subject to the Option are not intended to replace any pension rights or compensation;

(h) the grant of the Option and the Participant's participation in the Plan will not be interpreted to form an employment contract or relationship with the Employer;

(i) the future value of the underlying Shares is unknown and cannot be predicted with certainty. If the Participant exercises the Option and acquires Shares, the value of the acquired Shares may increase or decrease including below the Exercise Price;

(j) the Participant understands that the Company is not responsible for any foreign exchange fluctuation between the United States Dollar and the Participant's local currency that may affect the value of the Option or the Shares;

(k) the Participant shall have no rights, claim or entitlement to compensation or damages as a result of the Participant's cessation of employment or service for any reason whatsoever, whether or not in breach of contract or local labor law, insofar as these rights, claim or entitlement arise or may arise from the Participant's ceasing to have rights under or be entitled to exercise the Option as a result of such cessation or loss or diminution in value of the Option or any of the Shares purchased through exercise of the Option as a result of such cessation, and the Participant irrevocably releases his or her Employer from any such rights, entitlement or claim that may arise. If, notwithstanding the foregoing, any such right or claim is found by a court of competent jurisdiction to have arisen, then, by signing this Agreement, the Participant shall be deemed to have irrevocably waived his or her entitlement to pursue such rights or claim;

(l) the Participant has no right to compensation or damages on account of any loss in respect of this Option where the loss arises or is claimed to arise in whole or part from: (i) the termination of Participant's office or employment; or (ii) notice to terminate Participant's office or employment. This exclusion of liability shall apply however termination of office or employment, or the giving of notice, is caused, and however compensation or damages are claimed. For the purpose of the Plan, the implied duty of trust and confidence is expressly excluded.

15. **Data Privacy.**

(a) **The Participant hereby acknowledges and understands the collection, use, disclosure and transfer, in electronic or other form, of his or her personal data as described in this Agreement by and among, as applicable, his or her employer, the Company and its affiliates for the exclusive purpose of implementing, administering and managing his or her participation in the Plan.**

(b) **The Participant understands that the Company and its affiliates (including his or her employer), as applicable, hold certain personal information about him or her regarding the Participant's employment, the nature and amount of the Participant's compensation and the fact and conditions of the Participant's participation in the Plan, including, but not limited to, his or her name, home address, telephone number and e-mail address, date of birth, social insurance number or other identification number, salary, nationality, job title, any equity or directorships held in the Company and its affiliates, details of all options or any other entitlement to equity awarded, canceled, exercised, vested, unvested or outstanding in his or her favor, for the purpose of implementing, administering and managing the Plan (the "Data").**

(c) **The Participant understands that the Data may be transferred to the Company, its affiliates and any third parties assisting in the implementation, administration, and management of the Plan, that these recipients may be located in his or her country, or elsewhere, and that the recipient's country may have a lower standard of data privacy laws and protections than the Participant's country of residence. The Participant understands that he or she may request a list with the names and addresses of any potential recipients of the Data by contacting the Participant's local human resources representative. The Participant understands that the recipients receive, possess, use, retain and transfer the Data, in electronic or other form, for the purposes of implementing,**

administering and managing his or her participation in the Plan, including any requisite transfer of such Data as may be required to a broker or other third party. The Participant understands that the Data will be held only as long as is necessary to implement, administer and manage his or her participation in the Plan. The Participant understands that he or she may, at any time, view the Data, request additional information about the storage and processing of the Data, require any necessary amendments to the Data or refuse or withdraw the consents herein, in any case without cost, by contacting in writing his or her local human resources representative. The Participant understands, however, that objecting to the processing of his or her Data may affect his or her ability to participate in the Plan. For more information on the processing of his or her Data and other personal data, the Participant is referred to the Privacy Notice provided to him or her by his or her employer.

[Signature Page Follows]

IN WITNESS WHEREOF, the Company has caused an officer to execute this Agreement, and the Participant has executed this Agreement, effective as of the Date of Grant.

REPLIMUNE GROUP, INC.

Name:
Title:

I hereby accept the Option described in this Agreement, and I agree to be bound by the terms of the Plan and this Agreement. I hereby further agree that all decisions and determinations of the Committee shall be final and binding.

Participant:
Date:

U.S. Form

REPLIMUNE GROUP, INC.
2018 OMNIBUS INCENTIVE COMPENSATION PLAN
NONQUALIFIED STOCK OPTION GRANT AGREEMENT

This NONQUALIFIED STOCK OPTION GRANT AGREEMENT (the "Agreement"), dated as of (the "Date of Grant"), is delivered by Replimune Group, Inc. (the "Company") to (the "Participant").

RECITALS

The Replimune Group, Inc. 2018 Omnibus Incentive Compensation Plan (the "Plan") provides for the grant of stock options to purchase shares of common stock of the Company ("Company Stock"). The Committee has decided to make this nonqualified stock option grant as an inducement for the Participant to promote the best interests of the Company and its stockholders. The Participant hereby acknowledges the receipt of a copy of the official prospectus for the Plan, which is available by accessing the Company's intranet at **[Insert link]**. Paper copies of the Plan and the official Plan prospectus are available by contacting **[Insert title]** of the Company at **[Insert phone number]** or **[Insert email address]**. This Agreement is made pursuant to the Plan and is subject in its entirety to all applicable provisions of the Plan. Capitalized terms used herein and not otherwise defined will have the meanings set forth in the Plan.

1. Grant of Option. Subject to the terms and conditions set forth in this Agreement and in the Plan, the Company hereby grants to the Participant a nonqualified stock option (the "Option") to purchase shares of Company Stock ("Shares") at an Exercise Price of $ per Share. The Option shall become exercisable according to Section 2 below.

2. Exercisability of Option.

(a) The Option shall become vested and exercisable on the following dates (each, a "Vesting Date"), provided that the Participant continues to be employed by, or provide service to, the Employer from the Date of Grant until the applicable Vesting Date:

Vesting Date	[Percentage of] Shares for Which the Option is Exercisable as of the Vesting Date

(b) The vesting and exercisability of the Option is cumulative, but shall not exceed 100% of the Shares subject to the Option. **[If the foregoing schedule would produce fractional Shares, the number of Shares for which the Option becomes vested and exercisable shall be rounded down to the nearest whole Share and the fractional Shares will**

be accumulated so that the resulting whole Shares will be included in the number of Shares for which the Option becomes vested and exercisable on the last Vesting Date.]

(c) In the event of a Change of Control, the provisions of the Plan applicable to a Change of Control shall apply to the Option, and, in the event of a Change of Control, the Committee may take such actions as it deems appropriate pursuant to the Plan.

In addition, if the Company is not the surviving corporation (or survives only as a subsidiary of another corporation) as a result of the Change of Control and the Option is assumed by, or replaced with an award with comparable terms by, the surviving corporation (or parent or subsidiary of the surviving corporation) and the Participant's employment or service is terminated by the Employer without Cause or by the Participant for Good Reason (if applicable) upon or within 12 months following a Change of Control and before the Option is fully vested and exercisable in accordance with the vesting schedule set forth in Section 2(a) above, any unvested and unexercisable portion of the Option shall become fully vested and exercisable upon such termination of employment or service. In the event that the surviving corporation (or a parent or subsidiary of the surviving corporation) does not assume or replace the Option with a grant that has comparable terms, and the Participant is employed by, or providing services to, the Employer on the date of the Change of Control, any unvested and unexercisable portion of the Option shall become fully vested and exercisable upon the date of the Change of Control.

3. Term of Option.

(a) The Option shall have a term of ten years from the Date of Grant and shall terminate at the expiration of that period, unless it is terminated at an earlier date pursuant to the provisions of this Agreement or the Plan. Notwithstanding the foregoing, in the event that on the last business day of the term of the Option, the exercise of the Option is prohibited by applicable law, including a prohibition on purchases or sales of Company Stock under the Company's insider trading policy, the term of the Option shall be extended for a period of 30 days following the end of the legal prohibition, unless the Committee determines otherwise.

(b) The Option shall automatically terminate upon the happening of the first of the following events:

(i) The expiration of the 90-day period after the Participant ceases to be employed by, or provide service to, the Employer, if the termination is for any reason other than Disability, death or Cause.

(ii) The expiration of the one-year period after the Participant ceases to be employed by, or provide service to, the Employer on account of the Participant's Disability.

(iii) The expiration of the one-year period after the Participant ceases to be employed by, or provide service to, the Employer, if the Participant dies while employed by, or providing service to, the Employer or the Participant dies within 90 days after the Participant ceases to be so employed or to provide services to the Employer for any reason other than Disability, death or Cause.

(iv) The date on which the Participant ceases to be employed by, or provide service to, the Employer for Cause. In addition, notwithstanding the prior provisions of this Section 3, if the Participant engages in conduct that constitutes Cause after the Participant's employment or service terminates, the Option shall immediately terminate.

Notwithstanding the foregoing, in no event may the Option be exercised after the date that is immediately before the tenth anniversary of the Date of Grant, except as provided under Section 3(a) above. Any portion of the Option that is not exercisable at the time the Participant ceases to be employed by, or provide service to, the Employer shall immediately terminate.

4. Exercise Procedures.

(a) Subject to the provisions of Sections 2 and 3 above, the Participant may exercise part or all of the exercisable Option by giving the Company or its delegate written notice of intent to exercise, specifying the number of Shares as to which the Option is to be exercised and such other information as the Company or its delegate may require.

The Participant shall pay the Exercise Price (i) in cash or check, (ii) unless the Committee determines otherwise, by delivering shares of Company Stock owned by the Participant, which shall be valued at their Fair Market Value on the date of exercise, or by attestation (in accordance with procedures prescribed by the Company) to ownership of shares of Company Stock having a Fair Market Value on the date of exercise at least equal to the Exercise Price, (iii) if permitted by the Committee, by payment through a broker in accordance with procedures permitted by Regulation T of the Federal Reserve Board, or (iv) by such other method as the Committee may approve, to the extent permitted by applicable law. The Committee may impose from time to time such limitations as it deems appropriate on the use of shares of Company Stock to exercise the Option.

(b) The obligation of the Company to deliver Shares upon exercise of the Option shall be subject to all applicable laws, rules, and regulations and such approvals by governmental agencies as may be deemed appropriate by the Committee, including such actions as Company counsel shall deem necessary or appropriate to comply with relevant securities laws and regulations.

(c) All obligations of the Company under this Agreement shall be subject to the rights of the Employer as set forth in the Plan to withhold amounts required to be withheld for any taxes, if applicable. The Participant shall be required to pay to the Employer, or make other arrangements satisfactory to the Employer to provide for the payment of, any federal, state, local or other taxes that the Employer is required to withhold with respect to the Option.

(d) Upon exercise of the Option (or portion thereof), the Option (or portion thereof) will terminate and cease to be outstanding.

5. Restrictions on Exercise. Except as the Committee may otherwise permit pursuant to the Plan, only the Participant may exercise the Option during the Participant's lifetime and, after the Participant's death, the Option shall be exercisable (subject to the limitations specified in the Plan) solely by the legal representatives of the Participant, or by the person who acquires the right to exercise the Option by will or by the laws of descent and distribution, to the extent that the Option is exercisable pursuant to this Agreement.

6. Grant Subject to Plan Provisions. This grant is made pursuant to the Plan, the terms of which are incorporated herein by reference, and in all respects shall be interpreted in accordance with the Plan. The grant and exercise of the Option are subject to the provisions of the Plan and to interpretations, regulations and determinations concerning the Plan established from time to time by the Committee in accordance with the provisions of the Plan, including, but not limited to, provisions pertaining to (a) rights and obligations with respect to withholding taxes, (b) the registration, qualification or listing of the Shares, (c) changes in capitalization of the Company and (d) other requirements of applicable law. The Committee may amend the terms of this Option to the extent permitted by the Plan. The Committee shall have the authority to interpret and construe the Option pursuant to the terms of the Plan, and its decisions shall be conclusive as to any questions arising hereunder.

7. No Employment or Other Rights. The grant of the Option shall not confer upon the Participant any right to be retained by or in the employ or service of any Employer and shall not interfere in any way with the right of any Employer to terminate the Participant's employment or service at any time. The right of any Employer to terminate at will the Participant's employment or service at any time for any reason is specifically reserved.

8. No Stockholder Rights. Neither the Participant, nor any person entitled to exercise the Participant's rights in the event of the Participant's death, shall have any of the rights and privileges of a stockholder with respect to the Shares subject to the Option, until certificates for Shares have been issued upon the exercise of the Option.

9. Assignment and Transfers. Except as the Committee may otherwise permit pursuant to the Plan, the rights and interests of the Participant under this Agreement may not be sold,

assigned, encumbered or otherwise transferred except, in the event of the death of the Participant, by will or by the laws of descent and distribution. In the event of any attempt by the Participant to alienate, assign, pledge, hypothecate, or otherwise dispose of the Option or any right hereunder, except as provided for in this Agreement, or in the event of the levy or any attachment, execution or similar process upon the rights or interests hereby conferred, the Company may terminate the Option by notice to the Participant, and the Option and all rights hereunder shall thereupon become null and void. The rights and protections of the Company hereunder shall extend to any successors or assigns of the Company and to the Company's parents, subsidiaries, and affiliates. This Agreement may be assigned by the Company without the Participant's consent.

10. Applicable Law. The validity, construction, interpretation and effect of this Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to the conflicts of laws provisions thereof.

11. Notice. Any notice to the Company provided for in this instrument shall be addressed to the Company in care of the [ ] at the corporate headquarters of the Company, and any notice to the Participant shall be addressed to such Participant at the current address shown on the payroll of the Employer, or to such other address as the Participant may designate to the Employer in writing. Any notice shall be delivered by hand or enclosed in a properly sealed envelope addressed as stated above, registered and deposited, postage prepaid, in a post office regularly maintained by the United States Postal Service or by the postal authority of the country in which the Participant resides or to an internationally recognized expedited mail courier.

12. Company Policies. The Participant agrees that payment by the Participant shall be made in such manner and on such terms and conditions as may be required by the Committee and the Employer shall be entitled to set off against the amount of any such payment any amounts otherwise owed to the Participant by the Employer. In addition, the Participant agrees that the Option shall be subject to any applicable clawback or recoupment policies, share trading policies and other policies that may be implemented by the Board or imposed under applicable rule or regulation from time to time.

13. Application of Section 409A of the Code. This Agreement is intended to be exempt from section 409A of the Code and to the extent this Agreement is subject to section 409A of the Code, it will in all respects be administered in accordance with section 409A of the Code.

[***Signature Page Follows***]

IN WITNESS WHEREOF, the Company has caused an officer to execute this Agreement, and the Participant has executed this Agreement, effective as of the Date of Grant.

REPLIMUNE GROUP, INC.

_____

Name:
Title:

I hereby accept the Option described in this Agreement, and I agree to be bound by the terms of the Plan and this Agreement. I hereby further agree that all decisions and determinations of the Committee shall be final and binding.

Participant: _____
Date: _____

REPLIMUNE GROUP, INC.

2018 OMNIBUS INCENTIVE COMPENSATION PLAN (THE "PLAN")

SUB-PLAN FOR U.K. EMPLOYEES (THE "SUB-PLAN")

This Sub-Plan is a sub-plan of the Plan, and has been created and approved in accordance with the provisions of Section 18(g) of the Plan. Terms defined in the Plan shall have the same meanings in this Sub-Plan unless otherwise defined in this Sub-Plan.

SECTION 1 Definitions. As used in this Sub-Plan and/or any Grant Instrument under this Sub-Plan, the following terms shall have the meanings set forth below.

(a) "Employer's NICs" means the amount of secondary Class 1 national insurance contributions payable in respect of any Grant;

(b) "FPO" means the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 of the United Kingdom;

(c) "FSMA" means the Financial Services and Markets Act 2000 of the United Kingdom (as amended).

(d) "Group" has the meaning given to that term under FSMA;

(e) "U.K. Employee" means an employee of the Company or of any subsidiary (provided that such subsidiary is a member of the Company's Group) who is resident in the United Kingdom.

SECTION 2 Purpose.

(a) The purpose of this Sub-Plan is primarily to establish a sub-plan under the auspices of the Plan which will apply to Grants to be made to U.K. Employees. As a result:

(i) All Grants to U.K. Employees shall be made under this Sub-Plan;

(ii) No Grants shall be made under this Sub-Plan to any person other than a U.K. Employee, and this Sub-Plan shall not apply to any Grants made under the Plan to any such other person; and

(iii) Section 5 of the Plan shall be deemed amended accordingly insofar as it applies to this Sub-Plan.

(b) The provisions of the Sub-Plan vary from those applicable under the Plan so as to

(i) enable the Sub-Plan (and any Grants made or proposed to be made under the Sub-Plan, and communications concerning those Grants) to take advantage of certain exemptions available in the United Kingdom from certain prohibitions and restrictions which might otherwise apply to such grants and communications in the United Kingdom under the regulatory regime established under FSMA; and

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(ii) take account of United Kingdom tax treatment of the Grants.

(c) No Grant shall be granted under this Sub-Plan unless such Grant relates to a type of investment set out or referred to in Article 60(1) of the FPO. Section 3 of the Plan shall be deemed amended accordingly insofar as it applies to this Sub-Plan.

SECTION 3 Interaction With The Plan.

(a) This Sub-Plan should be read in conjunction with the Plan and is subject to the terms and conditions of the Plan except to the extent that the terms and conditions of the Plan differ from or conflict with the terms set out in this Sub-Plan, in which event, the terms set out in this Sub-Plan shall prevail.

(b) Subject to the other provisions of this Sub-Plan, the provisions of the Plan will apply to this Sub-Plan as if references therein to the Plan were references to this Sub-Plan.

SECTION 4 Taxes

(a) Section 14 of the Plan shall not apply to this Sub-Plan.

(b) All Grants under this Sub-Plan shall be subject to applicable United Kingdom taxes and national insurance contributions. As a condition to the issuance, vesting, exercise or settlement of any Grant, the Participant shall be required to pay to the Company or any relevant Employer, or make other arrangements satisfactory to the Company or the relevant Employer to provide for the payment of, any national, federal, state or local or other taxes, social security and employee's United Kingdom national insurance contributions ("Employment Taxes") that the Company or the relevant Employer is required to withhold, or in respect of which the Company or the relevant Employer is required to account to any tax authority including HM Revenue & Customs ("HMRC"), with respect to any income or gains arising or deemed to arise to the Participant in connection with any Grant (including for the avoidance of doubt in connection with the holding or disposal of any Company Stock received pursuant to any Grant). The Committee, in its discretion, may permit the satisfaction of such Employment Taxes by having Company Stock withheld from delivery with respect to any Grant up to a value that does not exceed the relevant required amount of Employment Taxes. The Company or the relevant Employer is authorised to withhold from any Grant made, any payment relating to a Grant under this Sub-Plan, including from a distribution of Company Stock, or any payroll or other payment to a Participant, amount of required Employment Taxes due or potentially payable in connection with any transaction involving a Grant under this Sub-Plan to the maximum extent permitted by law and regulation. To the extent any amount is withheld by the Company in accordance with such section, such amount shall either be remitted to the actual employer of the Participant on behalf of the Participant, or deemed to have been so remitted where the amount is paid to a relevant tax authority on behalf of such actual employer.

(c) The Participant may be required as a condition precedent to acquiring or exercising any Option or Company Stock to enter into a joint election under Section 431(1) of the United Kingdom Income Tax (Earnings and Pensions) Act 2003 for the full disapplication of Chapter 2 of Part 7 of that Act.

(d) In accepting any relevant Grant the Participant shall, if so required by the Company and to the extent lawful, agree with and undertake to the Company and any Employer which is a "secondary contributor" in respect of Class I national insurance contributions payable in respect of the Grant (or any Company Stock award in connection therewith) that the Company or relevant Employer may recover from the Participant the whole or part of any Employer's NICs; and shall either (i) (if so required the Company) join with the Company or relevant Employer in making an election (in such terms and such form and subject to such approval by HMRC as provided in paragraph 3B of Schedule 1 to the Social Security Contributions and Benefits Act 1992) for the whole or part of any liability of the Company or relevant Employer to Employer's NICs to be transferred to the Participant, or (ii) enter into a joint

agreement with the Company or relevant Employer at the time of the Grant to arrange for the reimbursement of the Company or relevant Employer for such Employer's NICs.

SECTION 5 General.

(a) The Sub-Plan, and any Grants granted hereunder, shall be governed, construed and administered in accordance with the laws of the State of Delaware, without reference to its conflict of laws provisions.

(b) The terms and conditions provided in this Sub-Plan are severable and if (despite the provisions of Section 4(a) of this Sub-Plan) any one or more provisions (or the effect of any such provision) are determined to be subject to any laws of the United Kingdom (or any constituent part thereof) and to be illegal or otherwise unenforceable under, such laws, in whole or in part, the remaining provisions shall nevertheless be binding and enforceable.

REPLIMUNE GROUP, INC.
EMPLOYEE STOCK PURCHASE PLAN

I. PURPOSE OF THE PLAN

This Employee Stock Purchase Plan is intended to promote the interests of Replimune Group, Inc., a Delaware corporation, by providing eligible employees with the opportunity to acquire a proprietary interest in the Corporation through participation in an employee stock purchase plan designed to qualify under Code Section 423 for one or more specified offerings made under such plan.

The Plan shall become effective at the Effective Time.

II. ADMINISTRATION OF THE PLAN

A. The Plan Administrator shall have full authority to interpret and construe any provision of the Plan and to adopt such rules and regulations for administering the Plan as it may deem necessary in order to bring one or more offerings under the Plan into compliance with the requirements of Code Section 423.

B. The Plan Administrator may authorize one or more offerings under the Plan that are not designed to comply with the requirements of Code Section 423 but are intended to comply with the requirements of the foreign jurisdictions in which those offerings are conducted. Such offerings shall be separate from any offerings designed to comply with the Code Section 423 requirements but may be conducted concurrently with those offerings.

C. Decisions of the Plan Administrator shall be final and binding on all parties having an interest in the Plan.

III. STOCK SUBJECT TO PLAN

A. The stock purchasable under the Plan shall be shares of authorized but unissued or reacquired Common Stock, including shares of Common Stock purchased on the open market. The number of shares of Common Stock reserved for issuance under the Plan shall initially be limited to 348,612 shares.

B. The number of shares of Common Stock available for issuance under the Plan shall automatically increase on the first trading day of each fiscal year during the term of the Plan (excluding extensions), by an amount equal to one percent (1%) of the total number of shares of Common Stock outstanding on the last trading day in the immediately preceding fiscal year, but in no event shall any such annual increase exceed 697,224 shares or such lesser number of shares determined by the Board in its discretion.

C. If there is any change in the number or kind of shares of Common Stock outstanding by reason of (i) a stock dividend, spinoff, recapitalization, stock split, reverse stock split or combination or exchange of shares, (ii) a merger, reorganization or consolidation, (iii) a reclassification or change in par value, or (iv) any other extraordinary or unusual event affecting

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the outstanding Common Stock as a class without the Corporation's receipt of consideration, or if the value of outstanding shares of Common Stock is substantially reduced as a result of a spinoff or the Corporation's payment of an extraordinary dividend or distribution, then the maximum number and kind of shares of Common Stock available for issuance under the Plan, the maximum number of shares of Common Stock available for the annual increase in shares available for issuance under the Plan, the maximum number and kind of shares of Common Stock purchasable per Participant on a Purchase Date during an offering period (and the corresponding maximum number and kind of shares of Common Stock purchasable per Participant for that offering period), the maximum number and kind of shares of Common Stock purchasable in total by all Participants on a Purchase Date (and the corresponding maximum number and kind of shares purchasable in total by all Participants for that offering period), the number and kind of shares in effect under each outstanding purchase right, and the price per share in effect under each outstanding purchase right shall be equitably adjusted by the Plan Administrator to reflect any increase or decrease in the number of, or change in the kind or value of, the issued shares of Common Stock to preclude, to the extent practicable, the enlargement or dilution of rights and benefits under the Plan and such outstanding purchase rights; provided, however, that any fractional shares resulting from such adjustment shall be eliminated. In addition, in the event of a Change of Control, the provisions of Section VII.H shall apply. Any adjustments to outstanding purchase rights shall be consistent with Code Section 424, to the extent applicable. The adjustments shall be made in such manner as the Plan Administrator deems appropriate. The Plan Administrator shall have the sole discretion and authority to determine what appropriate adjustments shall be made and any adjustments determined by the Plan Administrator shall be final, binding and conclusive.

IV. OFFERING PERIODS

A. Shares of Common Stock shall be offered for purchase under the Plan through a series of successive offering periods until such time as (i) the maximum number of shares of Common Stock available for issuance under the Plan shall have been purchased or (ii) the Plan shall have been sooner terminated.

B. Each offering period shall commence at such time and be of such duration not to exceed twenty-seven (27) months, as determined by the Plan Administrator prior to the start of the applicable offering period. The initial offering period shall commence on the date established by the Plan Administrator and shall be of such duration (not to exceed twenty-seven (27) months) as determined by the Plan Administrator.

C. The terms and conditions of each offering period may vary, and two or more offerings periods may run concurrently under the Plan, each with its own terms and conditions. In addition, special offering periods may be established with respect to entities that are acquired by the Corporation (or any subsidiary of the Corporation) or under such other circumstances as the Plan Administrator deems appropriate. In no event, however, shall the terms and conditions of any offering period contravene the express limitations and restrictions of the Plan, and the participants in each separate offering period conducted by one or more Participating Corporations in the United States shall have equal rights and privileges under that offering in accordance with the requirements of Code Section 423(b)(5) and the applicable Treasury Regulations thereunder.

D. Each offering period shall be comprised of one or more Purchase Intervals as determined by the Plan Administrator. The first Purchase Interval under the Plan shall commence on the date established by the Plan Administrator and shall be of such duration as determined by the Plan Administrator.

E. Should the Fair Market Value per share of Common Stock on any Purchase Date within an offering period be less than the Fair Market Value per share of Common Stock on the start date of that offering period, then the individuals participating in that offering period shall, immediately after the purchase of shares of Common Stock on their behalf on such Purchase Date, be transferred from that offering period and automatically enrolled in the offering period commencing on the next business day following such Purchase Date, provided and only if the Fair Market Value per share of Common Stock on the start date of that new offering period is lower than the Fair Market Value per share of Common Stock on the start date of the offering period in which they were currently enrolled.

F. An Eligible Employee may participate in only one offering period at a time.

V. ELIGIBILITY

A. Each individual who is an Eligible Employee on the start date of any offering period under the Plan may enter that offering period on such start date or on the start date of any Purchase Interval within that offering period, provided he or she remains an Eligible Employee. Each individual who first becomes an Eligible Employee after the start date of any offering period may enter that offering period on the start date of any Purchase Interval within that offering period on which he or she is an Eligible Employee. The date an individual enters an offering period shall be designated his or her Entry Date for purposes of that offering period.

B. Each U.S. corporation that is a Corporate Affiliate on the Effective Time has been designated as a Participating Corporation. Each U.S. corporation that becomes a Corporate Affiliate after the Effective Time shall automatically become a Participating Corporation effective as of the start date of the first offering date coincident with or next following the date on which it becomes such an affiliate, unless the Plan Administrator determines otherwise prior to the start date of that offering period. Each non-U.S. corporation that becomes a Corporate Affiliate after the Effective Time shall become a Participating Corporation when authorized by the Plan Administrator to extend the benefits of the Plan to its Eligible Employees.

C. Except as otherwise provided in Section IV.E, the Eligible Employee must, in order to participate in the Plan for a particular offering period, complete and submit the enrollment and payroll deduction authorization, stock purchase agreement, and other forms prescribed by the Plan Administrator in accordance with enrollment procedures prescribed by the Plan Administrator (which may include accessing the website designated by the Corporation and electronically enrolling and authorizing payroll deductions or completing other forms) on or before his or her scheduled Entry Date.

VI. PAYROLL DEDUCTIONS

A. Except to the extent otherwise determined by the Plan Administrator, payment for shares of Common Stock purchased under the Plan shall be effected by means of the Participant's authorized payroll deduction. The payroll deductions or other contributions pursuant to Section VI.E that each Participant may authorize for purposes of acquiring shares of Common Stock during an offering period may be in any multiple of one percent (1%) of the Base Salary paid to that Participant during each Purchase Interval within such offering period, up to a maximum

of fifteen percent (15%), unless the Plan Administrator establishes a different maximum percentage prior to the start date of the applicable offering period.

B. The rate of payroll deduction shall continue in effect throughout the offering period, except for changes effected in accordance with the following guidelines:

(i) The Participant may, at any time during the offering period, reduce the rate of his or her payroll deduction to become effective as soon as administratively possible after filing the appropriate form with the Plan Administrator. The Participant may not, however, effect more than one (1) such reduction per Purchase Interval.

(ii) The Participant may, at any time during the offering period, increase the rate of his or her payroll deduction (up to the maximum percentage limit for that offering period) to become effective as soon as administratively possible after filing the appropriate form with the Plan Administrator. The Participant may not, however, effect more than one (1) such increase per Purchase Interval.

(iii) The Participant may at any time reduce his or her rate of payroll deduction under the Plan to 0%. Such reduction shall become effective as soon as administratively practicable following the filing of the appropriate form with the Plan Administrator. The Participant's existing payroll deductions shall be applied to the purchase of shares of Common Stock on the next scheduled Purchase Date.

C. Payroll deductions shall begin on the first pay day administratively feasible following the Participant's Entry Date into the offering period and shall (unless sooner terminated by the Participant) continue through the pay day ending with or immediately prior to the last day of that offering period. The payroll deductions or other contributions collected shall be credited to the Participant's book account under the Plan, but, except to the extent otherwise required by applicable law or the terms of that offering period, no interest shall be paid on the balance from time to time outstanding in such account. Unless the Plan Administrator determines otherwise prior to the start of the applicable offering period, the amounts collected from the Participant shall not be required to be held in any segregated account or trust fund and may be commingled with the general assets of the Corporation and used for general corporate purposes. Payroll deductions or other contributions collected in a currency other than U.S. Dollars shall be converted into U.S. Dollars on the last day of the Purchase Interval in which collected, with such conversion to be based on the exchange rate determined by the Plan Administrator in its sole discretion. Any changes or fluctuations in the exchange rate at which the payroll deductions or other contributions collected on the Participant's behalf are converted into U.S. Dollars on each Purchase Date shall be borne solely by the Participant.

D. Payroll deductions or other contributions shall automatically cease upon the termination of the Participant's purchase right in accordance with the provisions of the Plan.

E. The Plan Administrator may permit Eligible Employees of one or more Participating Corporations to participate in the Plan by making contributions other than through payroll deductions or as a lump sum. The Plan Administrator may adopt such rules and regulations for administering the Plan as it may deem necessary, in its sole and absolute discretion, to facilitate

contributions under this Section. Except as required by law, such rules and regulations need not be uniform and need not apply to all Eligible Employees.

F. The Participant's acquisition of Common Stock under the Plan on any Purchase Date shall neither limit nor require the Participant's acquisition of Common Stock on any subsequent Purchase Date, whether within the same or a different offering period.

VII. PURCHASE RIGHTS

A. **Grant of Purchase Right.** A Participant shall be granted a separate purchase right for each offering period in which he or she participates. The purchase right shall be granted on the Participant's Entry Date into the offering period. Prior to the start date of the applicable offering period and subject to the limitations of Article VIII below, the Plan Administrator shall determine the maximum number of shares of Common Stock that a Participant can purchase on each Purchase Date within that offering period and the maximum number of shares of Common Stock that each Participant can purchase for that offering period, subject to periodic adjustments in the event of certain changes in the Corporation's capitalization.

Under no circumstances shall purchase rights be granted under the Plan to any Eligible Employee if such individual would, immediately after the grant, own (within the meaning of Code Section 424(d)) or hold outstanding options or other rights to purchase, stock possessing five percent (5%) or more of the total combined voting power or value of all classes of stock of the Corporation or any Corporate Affiliate.

B. **Exercise of the Purchase Right.** Each purchase right shall be automatically exercised in installments on each successive Purchase Date within the offering period, and shares of Common Stock shall accordingly be purchased on behalf of each Participant (other than Participants whose payroll deductions have previously been refunded pursuant to the Termination of Purchase Right provisions below) on each such Purchase Date. The purchase shall be effected by applying the Participant's payroll deductions or other contributions (in each case as converted to U.S. Dollars) for the Purchase Interval ending on such Purchase Date to the purchase of whole shares of Common Stock at the purchase price in effect for the Participant for that Purchase Date.

C. **Purchase Price.** The purchase price per share at which Common Stock will be purchased on the Participant's behalf on each Purchase Date within the offering period will be established by the Plan Administrator prior to the start of that offering period, but in no event shall such purchase price be less than eighty-five percent (85%) of the *lower* of (i) the Fair Market Value per share of Common Stock on the Participant's Entry Date into that offering period or (ii) the Fair Market Value per share of Common Stock on that Purchase Date.

D. **Number of Purchasable Shares.** The number of shares of Common Stock purchasable by a Participant on each Purchase Date during the particular offering period in which he or she is enrolled shall be the number of whole shares obtained by dividing the amount collected from the Participant through payroll deductions or other contributions during the Purchase Interval ending with that Purchase Date by the purchase price in effect for the Participant for that Purchase Date. However, the maximum number of shares of Common Stock purchasable per Participant on any one Purchase Date shall be governed by the limitation set forth in Section VII.A, as adjusted

periodically in the event of certain changes in the Corporation's capitalization. In addition, prior to the start of an offering period, the Plan Administrator shall determine the maximum number of shares of Common Stock purchasable in total by all Participants on any one Purchase Date during that offering period and the maximum number of shares of Common Stock purchasable in total by all Participants during that offering period, subject to periodic adjustments in the event of certain changes in the Corporation's capitalization. These limitations shall apply for each subsequent offering period, unless otherwise determined by the Plan Administrator prior to the start of any offering period.

E. **Excess Payroll Deductions.** Any payroll deductions or other contributions not applied to the purchase of shares of Common Stock on any Purchase Date because they are not sufficient to purchase a whole share of Common Stock shall be held for the purchase of Common Stock on the next Purchase Date. However, any payroll deductions or other contributions not applied to the purchase of Common Stock by reason of the limitation on the maximum number of shares purchasable per Participant or in the aggregate on the Purchase Date shall be promptly refunded.

F. **Suspension of Payroll Deductions.** In the event that a Participant is, by reason of the accrual limitations in Article VIII, precluded from purchasing additional shares of Common Stock on one or more Purchase Dates during the offering period in which he or she is enrolled, then no further payroll deductions or other contributions for that offering period shall be collected from such Participant with respect to those Purchase Dates. The suspension of such deductions or other contributions shall not terminate the Participant's purchase right for the offering period in which he or she is enrolled, and the Participant's payroll deductions or other contributions shall automatically resume on behalf of such Participant once he or she is again able to purchase shares during that offering period in compliance with the accrual limitations of Article VIII. All refunds shall be in the currency in which paid by the Corporation or applicable Corporate Affiliate.

G. **Termination of Purchase Right.** The following provisions shall govern the termination of outstanding purchase rights:

(i) A Participant may withdraw from the offering period in which he or she is enrolled by filing the appropriate form with the Plan Administrator (or its designate) at any time prior to the next scheduled Purchase Date in that offering period, and no further payroll deductions or other contributions shall be collected from the Participant with respect to the offering period. Any payroll deductions or other contributions collected during the Purchase Interval in which such withdrawal occurs shall, at the Participant's election, be immediately refunded (in the currency in which paid by the Corporation or applicable Corporate Affiliate) or held for the purchase of shares on the next Purchase Date. If no such election is made at the time of such

withdrawal, then the payroll deductions or other contributions collected with respect to the Purchase Interval in which such withdrawal occurs shall be refunded (in the currency in which paid by the Corporation or applicable Corporate Affiliate) to the Participant as soon as possible.

(ii) The Participant's withdrawal from the offering period shall be irrevocable, and the Participant may not subsequently rejoin that offering period. In order to resume participation in any subsequent offering period, such individual must re-enroll in the Plan

(by making a timely filing of the prescribed enrollment forms) on or before his or her scheduled Entry Date into that offering period.

(iii) Should the Participant cease to remain an Eligible Employee for any reason (including death, disability or change in status) while his or her purchase right remains outstanding, then that purchase right shall immediately terminate, and all of the Participant's payroll deductions or other contributions for the Purchase Interval in which the purchase right so terminates shall be immediately refunded in the currency in which paid by the Corporation or applicable Corporate Affiliate. However, should the Participant cease to remain in active service by reason of an approved unpaid leave of absence, then the Participant shall have the right, exercisable up until the last business day of the Purchase Interval in which such leave commences, to (a) withdraw all the payroll deductions or other contributions collected to date on his or her behalf for that Purchase Interval or (b) have such funds held for the purchase of shares on his or her behalf on the next scheduled Purchase Date. In no event, however, shall any further payroll deductions or other contributions be collected on the Participant's behalf during such leave. Upon the Participant's return to active service (x) within three (3) months following the commencement of such leave or (y) prior to the expiration of any longer period for which such Participant is provided with reemployment rights by statute or contract, his or her payroll deductions or other contributions under the Plan shall automatically resume at the rate in effect at the time the leave began, unless the Participant withdraws from the Plan prior to his or her return. An individual who returns to active employment following a leave of absence which exceeds in duration the applicable (x) or (y) time period above will be treated as a new Employee for purposes of subsequent participation in the Plan and must accordingly re-enroll in the Plan (by making a timely filing of the prescribed enrollment forms) on or before his or her scheduled Entry Date into the offering period.

H. **Change of Control.** Each outstanding purchase right shall automatically be exercised, immediately prior to the effective date of any Change of Control, by applying the payroll deductions or other contributions of each Participant for the Purchase Interval in which such Change of Control occurs to the purchase of whole shares of Common Stock at the purchase price per share in effect for that Purchase Internal pursuant to the Purchase Price provisions of Paragraph C of this Article VII. For this purpose, payroll deductions or other contributions shall be converted from the currency in which paid by the Corporation or applicable Corporate Affiliate into U.S. Dollars on the exchange rate in effect on the purchase date. However, the applicable limitation on the number of shares of Common Stock purchasable per Participant shall continue to apply to any such purchase, but not the limitation applicable to the maximum number of shares of Common Stock purchasable in total by all Participants.

The Corporation shall use reasonable efforts to provide at least ten (10) days prior written notice of the occurrence of any Change of Control, and Participants shall, following the receipt of such notice, have the right to terminate their outstanding purchase rights prior to the effective date of the Change of Control.

I. **Proration of Purchase Rights.** Should the total number of shares of Common Stock to be purchased pursuant to outstanding purchase rights on any particular date exceed the number of shares then available for issuance under the Plan, the Plan Administrator shall make a pro-rata allocation of the available shares on a uniform and nondiscriminatory basis,

and the payroll deductions or other contributions of each Participant, to the extent in excess of the aggregate purchase price payable for the Common Stock pro-rated to such individual, shall be refunded.

J. **ESPP Broker Account**. The Corporation may require that the shares purchased on behalf of each Participant shall be deposited directly into a brokerage account which the Corporation shall establish for the Participant at a Corporation-designated brokerage firm. The account will be known as the ESPP Broker Account. Except as otherwise provided below, the deposited shares may not be transferred (either electronically or in certificate form) from the ESPP Broker Account until the ***later*** of the following two periods: (i) the end of the two (2)-year period measured from the Participant's Entry Date into the offering period in which the shares were purchased and (ii) the end of the one (1)-year measured from the actual purchase date of those shares. Such limitation shall apply both to transfers to different accounts with the same ESPP broker and to transfers to other brokerage firms. Any shares held for the required holding period may thereafter be transferred (either electronically or in certificate form) to other accounts or to other brokerage firms.

The foregoing procedures shall not in any way limit when the Participant may sell his or her shares. Those procedures are designed solely to assure that any sale of shares prior to the satisfaction of the required holding period is made through the ESPP Broker Account. In addition, the Participant may request a stock certificate or share transfer from his or her ESPP Broker Account prior to the satisfaction of the required holding period should the Participant wish to make a gift of any shares held in that account. However, shares may not be transferred (either electronically or in certificate form) from the ESPP Broker Account for use as collateral for a loan, unless those shares have been held for the required holding period.

The foregoing procedures shall apply to all shares purchased by each Participant in the United States, whether or not that Participant continues in Employee status.

K. **Assignability.** The purchase right shall be exercisable only by the Participant and shall not be assignable or transferable by the Participant.

L. **Stockholder Rights.** A Participant shall have no stockholder rights with respect to the shares subject to his or her outstanding purchase right until the shares are purchased on the Participant's behalf in accordance with the provisions of the Plan and the Participant has become a holder of record of the purchased shares.

M. **Withholding Taxes.** The Corporation's obligation to deliver shares upon exercise of a purchase right under the Plan shall be subject to the satisfaction of all income, employment and payroll taxes, social insurance, national insurance contributions, other contributions, payment on

account obligations or other payments required to be collected, withheld or accounted for in connection with the purchase right.

VIII. ACCRUAL LIMITATIONS

A. No Participant shall be entitled to accrue rights to acquire Common Stock pursuant to any purchase right outstanding under the Plan if and to the extent such accrual, when aggregated with (i) rights to purchase Common Stock accrued under any other purchase right

granted under the Plan and (ii) similar rights accrued under other employee stock purchase plans (within the meaning of Code Section 423) of the Corporation or any Corporate Affiliate, would otherwise permit such Participant to purchase more than Twenty-Five Thousand U.S. Dollars (US $25,000.00) worth of stock of the Corporation or any Corporate Affiliate (determined on the basis of the Fair Market Value per share on the date or dates such rights are granted) for each calendar year such rights are at any time outstanding.

B. For purposes of applying such accrual limitations to the purchase rights granted under the Plan, the following provisions shall be in effect:

(i) The right to acquire Common Stock under each outstanding purchase right shall accrue in a series of installments on each successive Purchase Date during the offering period on which such right remains outstanding.

(ii) No right to acquire Common Stock under any outstanding purchase right shall accrue to the extent the Participant has already accrued in the same calendar year the right to acquire Common Stock under one or more other purchase rights at a rate equal to Twenty-Five Thousand U.S. Dollars (U.S. $25,000.00) worth of Common Stock (determined on the basis of the Fair Market Value per share on the date or dates of grant) for each calendar year such rights were at any time outstanding.

C. If by reason of such accrual limitations, any purchase right of a Participant does not accrue for a particular Purchase Interval, then the payroll deductions or other contributions which the Participant made during that Purchase Interval with respect to such purchase right shall be promptly refunded.

D. In the event there is any conflict between the provisions of this Article VIII and one or more provisions of the Plan or any instrument issued thereunder, the provisions of this Article VIII shall be controlling.

IX. EFFECTIVE DATE AND TERM OF THE PLAN

A. The Plan shall become effective at the Effective Time; provided, however, that (i) the Plan shall have been approved by the stockholders of the Corporation and (ii) no purchase rights granted under the Plan shall be exercised, and no shares of Common Stock shall be issued hereunder, until the Corporation shall have complied with all applicable requirements of the 1933 Act (including the registration of the shares of Common Stock issuable under the Plan on a Form S-8 registration statement filed with the Securities and Exchange Commission), all applicable listing requirements of any Stock Exchange (or the Nasdaq Stock Market, if applicable) on which the Common Stock is listed for trading and all other applicable requirements established by law or regulation.

B. Unless sooner terminated by the Board, the Plan shall terminate upon the earliest of (i) the last business day immediately preceding the tenth anniversary of the Effective Time, (ii) the date on which all shares available for issuance under the Plan shall have been sold pursuant to purchase rights exercised under the Plan or (iii) the date on which all purchase rights are exercised in connection with a Change of Control. No further purchase rights shall be granted

or exercised, and no further payroll deductions or other contributions shall be collected, under the Plan following such termination.

X. AMENDMENT OF THE PLAN

A. The Board may alter or amend the Plan at any time to become effective as of the start date of the next offering period thereafter under the Plan. In addition, the Board may suspend or terminate the Plan at any time to become effective immediately following the close of any subsequent Purchase Interval.

B. In no event may the Board amend the Plan without the approval of the Corporation’s stockholders to the extent such stockholder approval is required under Code Section 423 or other applicable law.

XI. GENERAL PROVISIONS

A. All costs and expenses incurred in the administration of the Plan shall be paid by the Corporation; however, each Plan Participant shall bear all costs and expenses incurred by such individual in the sale or other disposition of any shares purchased under the Plan.

B. Nothing in the Plan shall confer upon the Participant any right to continue in the employ of the Corporation or any Corporate Affiliate for any period of specific duration or interfere with or otherwise restrict in any way the rights of the Corporation (or any Corporate Affiliate employing such person) or of the Participant, which rights are hereby expressly reserved by each, to terminate such person’s employment at any time for any reason, with or without cause.

C. The provisions of the Plan shall be governed by the laws of the State of Delaware, without resort to that State’s conflict-of-laws rules.

XII. DEFINITIONS

The following definitions shall be in effect under the Plan:

A. **Base Salary** shall, unless otherwise specified by the Plan Administrator prior to the start of an offering period, mean the regular base salary paid to such Participant by one or more Participating Corporations during such individual's period of participation in one or more offering periods under the Plan. Base Salary shall be calculated before deduction of (A) any income or employment tax or other withholdings or (B) any contributions made by the Participant to any Code Section 401(k) salary deferral plan or Code Section 125 cafeteria benefit program now or hereafter established by the Corporation or any Corporate Affiliate. Base Salary shall not include any contributions made on the Participant's behalf by the Corporation or any Corporate Affiliate to any employee benefit or welfare plan now or hereafter established (other than Code Section 401(k) or Code Section 125 contributions deducted from such Base Salary).

B. **Board** shall mean the Corporation's Board of Directors.

C. **Change of Control** shall be deemed to have occurred if:

(i) Any "person" (as such term is used in Sections 13(d) and 14(d) of the 1934 Act) becomes a "beneficial owner" (as defined in Rule 13d-3 under the 1934 Act), directly or indirectly, of securities of the Corporation representing more than 50% of the voting power of the then outstanding securities of the Corporation; provided that a Change of Control shall not be deemed to occur as a result of a transaction in which the Corporation becomes a subsidiary of another corporation and in which the stockholders of the Corporation, immediately prior to the transaction, will beneficially own, immediately after the transaction, shares entitling such stockholders to more than 50% of all votes to which all stockholders of the parent corporation would be entitled in the election of directors.

(ii) The consummation of (A) a merger or consolidation of the Corporation with another corporation where, immediately after the merger or consolidation, the stockholders of the Corporation, immediately prior to the merger or consolidation, will not beneficially own, in substantially the same proportion as ownership immediately prior to the merger or consolidation, shares entitling such stockholders to more than 50% of all votes to which all stockholders of the surviving corporation would be entitled in the election of directors, or where the members of the Board, immediately prior to the merger or consolidation, will not, immediately after the merger or consolidation, constitute a majority of the board of directors of the surviving corporation or (B) a sale or other disposition of all or substantially all of the assets of the Corporation.

(iii) A change in the composition of the Board over a period of 12 consecutive months or less such that a majority of the Board members ceases, by reason of one or more contested elections, or threatened election contests, for Board membership, to be comprised of individuals who either (A) have been Board members continuously since the beginning of such period or (B) have been elected or nominated for election as Board members during such period by at least a majority of the Board members described in clause (A) who were still in office at the time the Board approved such election or nomination.

(iv) The consummation of a complete dissolution or liquidation of the Corporation.

D. **Code** shall mean the Internal Revenue Code of 1986, as amended.

E. **Common Stock** shall mean the Corporation's common stock, $0.001 par value.

F. **Corporate Affiliate** shall mean any parent or subsidiary corporation of the Corporation (as determined in accordance with Code Section 424), whether now existing or subsequently established.

G. **Corporation** shall mean Replimune Group, Inc., a Delaware corporation, and any corporate successor to all or substantially all of the assets or voting stock of Replimune Group, Inc. that shall assume the Plan.

H. **Effective Time** shall mean the date on which the registration statement for the initial public offering of the Common Stock is declared effective by the Securities and

Exchange Commission and the Common Stock is priced for the initial public offering of such Common Stock, subject to approval of the Plan by the stockholders of the Corporation.

I. **Eligible Employee** shall mean any person who is employed by a Participating Corporation and, unless otherwise mandated by local law, such person is employed on a basis under which he or she is regularly expected to render more than twenty (20) hours of service per week for more than five (5) months per calendar year for earnings that are considered wages under Code Section 3401(a); provided, however, that the Plan Administrator may, prior to the start of the applicable offering period, waive one or both of the twenty (20) hour and five (5) month service requirements.

J. **Entry Date** shall mean the date an Eligible Employee first commences participation in the offering period in effect under the Plan. The earliest Entry Date under the Plan shall be determined by the Plan Administrator, but in no event shall be no earlier than the Effective Time.

K. **Fair Market Value** per share of Common Stock on any relevant date shall be the closing price per share of Common Stock at the close of regular trading hours (i.e., before after-hours trading begins) on the date in question on the Stock Exchange serving as the primary market for the Common Stock, as such price is reported by the National Association of Securities Dealers (if primarily traded on the Nasdaq Global or Global Select Market) or as officially quoted in the composite tape of transactions on any other Stock Exchange on which the Common Stock is then primarily traded. If there is no closing selling price for the Common Stock on the date in question, then the Fair Market Value shall be the closing selling price on the last preceding date for which such quotation exists.

L. **1933 Act** shall mean the Securities Act of 1933, as amended.

M. **1934 Act** shall mean the Securities Exchange Act of 1934, as amended.

N. **Participant** shall mean any Eligible Employee of a Participating Corporation who is actively participating in the Plan.

O. **Participating Corporation** shall mean the Corporation and such Corporate Affiliate or Corporate Affiliates as may be authorized, in accordance with Section V.B of the Plan, to extend the benefits of the Plan to their Eligible Employees.

P. **Plan** shall mean the Replimune Group, Inc. Employee Stock Purchase Plan, as set forth in this document.

Q. **Plan Administrator** shall mean the committee of two (2) or more Board members appointed by the Board to administer the Plan.

R. **Purchase Date** shall mean the last business day of each Purchase Interval.

S. **Purchase Interval** shall mean each successive six (6)-month period within the offering period at the end of which there shall be purchased shares of Common Stock on behalf of each Participant; provided, however, that the Plan Administrator may, prior to the start of the

applicable offering period, designate a different duration for the Purchase Intervals within that offering period.

T. **Stock Exchange** shall mean the American Stock Exchange, the Nasdaq Capital, Global or Global Select Market, or the New York Stock Exchange.

Exhibit 10.8

EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT (this "Agreement") is entered into by and between Replimune, Inc. (the "Company") and Howard Kaufman (the "Executive") as of June 22, 2018.

WHEREAS, the Company desires to continue to employ the Executive as its Chief Medical Officer and the Executive desires to continue to serve in such capacity on behalf of the Company;

NOW, THEREFORE, in consideration of the premises and of the mutual covenants and agreements hereinafter set forth, the Company and the Executive hereby agree as follows:

1. Employment.

(a) Term. The initial term of this Agreement shall begin on June 22, 2018 (the "Effective Date"), and shall continue for two years, unless the Executive's employment is sooner terminated in accordance with Sections 6, 7, 8, 9, 10, or 11. Unless earlier terminated, the term of this Agreement shall automatically renew for periods of one year unless either party gives the other party written notice at least 90 days prior to the end of the then existing term that the term of this Agreement shall not be further extended. The period commencing on the Effective Date and ending on the date on which the term of this Agreement terminates is referred to herein as the "Term."

(b) Duties. During the Term, the Executive shall continue to serve as the Chief Medical Officer of the Company, with duties, responsibilities and authority commensurate therewith, and shall continue to report to the Chief Executive Officer of the Company (the "CEO"). The Executive shall perform all duties and accept all responsibilities incident to such position as may be reasonably assigned to the Executive by the CEO. The Executive represents to the Company that the Executive is not subject to or a party to any employment agreement, noncompetition covenant, or other agreement that would be breached by, or prohibit the Executive from, executing this Agreement and performing fully the Executive's duties and responsibilities hereunder.

(c) Best Efforts. During the Term, the Executive shall devote his best efforts and full time and attention to promote the business and affairs of the Company and its affiliated entities, and may be engaged in other business activities only to the extent the Executive has received the prior written consent of the Board of Directors of the Company (the "Board") and such activities do not materially interfere or conflict with the Executive's obligations to the Company hereunder, including, without limitation, obligations pursuant to Section 15 below. The foregoing shall not be construed as preventing the Executive from (1) serving on civic, educational, philanthropic or charitable boards or committees and (2) managing personal investments, so long as such activities are permitted under the Company's code of conduct and employment policies and do not violate the provisions of Section 15 below.

(d) Principal Place of Employment. The Executive understands and agrees that his principal place of employment will be in the Company's offices located in the Boston, MA

metropolitan area and that the Executive will be required to travel for business in the course of performing his duties for the Company.

2. Compensation.

(a) Base Salary. During the Term, the Company shall pay the Executive a base salary ("Base Salary"), at the annual rate of $406,000, which shall be paid in installments in accordance with the Company's normal payroll practices. The Executive's Base Salary shall be reviewed annually by the CEO pursuant to the normal performance review policies for senior-level executives and may be adjusted from time to time as the Compensation Committee of the Board (the "Compensation Committee") deems appropriate. The Compensation Committee may take any actions of the Board pursuant to this Agreement.

(b) Annual Bonus. The Executive shall be eligible to be awarded an annual discretionary bonus for each fiscal year during the Term, commencing with the 2018 fiscal year, based on the establishment and attainment of individual and corporate performance goals and targets established by the Compensation Committee ("Annual Bonus") in its sole discretion. The target amount of the Executive's Annual Bonus for any fiscal year during the Term is 35% of the Executive's annual Base Salary. Any Annual Bonus awarded shall be paid after the end of the fiscal year to which it relates, at the same time and under the same terms and conditions as the bonuses for other executives of the Company; provided that the Executive must be employed in good standing on the date that Executive's Annual Bonus is paid. The Annual Bonus shall be subject to the terms of the annual bonus plan that is applicable to other executives of the Company, including the requirement as to continued employment in good standing, subject to the provisions of Section 7 below.

3. Retirement and Welfare Benefits. During the Term, the Executive shall be eligible to participate in the Company's health, life insurance, long-term disability, retirement and welfare benefit plans and programs available to similarly-situated employees of the Company, pursuant to their respective terms and conditions. Nothing in this Agreement shall preclude the Company or any Affiliate of the Company from terminating or amending any employee benefit plan or program from time to time after the Effective Date.

4. Paid Time Off. During the Term, the Executive shall be entitled to five weeks of paid time off, in accordance with the Company's paid time off policy, as may in effect from time to time. The Executive may use paid time off for vacation, personal time, or sick time (in accordance with applicable law).

5. Business Expenses. The Company shall reimburse the Executive for all necessary and reasonable travel (which does not include commuting) and other business expenses incurred by the Executive in the performance of his duties hereunder in accordance with such policies and procedures as the Company may adopt generally from time to time for executives.

6. Termination Without Cause; Resignation for Good Reason. The Company may terminate the Executive's employment at any time without Cause (as defined below) upon 30 days' advance written notice. The Executive may initiate a termination of employment by resigning without Cause or for Good Reason (as defined below) as described below. Upon termination by

the Company without Cause or resignation by the Executive for Good Reason before or after the Change in Control Protection Period (as defined below), if the Executive executes and does not revoke a written Release (as defined below), the Executive shall be entitled to receive, in lieu of any payments under any severance plan or program for employees or executives, the following:

(a) The Company will pay the Executive an amount equal to 0.75 times the Executive's annual Base Salary. Payment shall be made over the nine-month period following the termination date in installments in accordance with the Company's normal payroll practices. Payment will begin within 60 days following the termination date, and any installments not paid between the termination date and the date of the first payment will be paid with the first payment.

(b) The Company shall make a lump-sum payment within 60 days following the termination date equal to the COBRA premiums that the Executive would pay if he elected continued health coverage under the Company's health plan for the Executive and his dependents for the nine-month period following the termination date, based on the COBRA rates in effect at the termination date.

(c) The Company shall pay any other amounts earned, accrued and owing but not yet paid under Section 2 above and any benefits accrued and due under any applicable benefit plans and programs of the Company ("Accrued Obligations"), regardless of whether the Executive executes or revokes the Release.

7. Change of Control Termination. Notwithstanding the foregoing, upon termination by the Company without Cause or resignation by the Executive for Good Reason, in each case on or within 12 months following a Change of Control (as defined in the Replimune Group, Inc. 2018 Omnibus Incentive Compensation Plan) (the "Change of Control Protection Period"), and provided that the Executive executes and does not revoke a written Release, then the Executive shall be entitled to receive, in lieu of any payments under Section 6 of this Agreement or any severance plan or program for employees or executives, the following:

(a) The Company will pay the Executive an amount equal to the sum of (x) the Executive's annual Base Salary, plus (y) the Executive's target Annual Bonus for the year of termination. Payment shall be made over the 12-month period following the termination date in installments in accordance with the Company's normal payroll practices. Payment will begin within 60 days following the termination date, and any installments not paid between the termination date and the date of the first payment will be paid with the first payment.

(b) The Company shall make a lump-sum payment within 60 days following the termination date equal to the COBRA premiums that the Executive would pay if he elected continued health coverage under the Company's health plan for the Executive and his dependents for the 12-month period following the termination date, based on the COBRA rates in effect at the termination date.

(c) The Company shall pay any Accrued Obligations, regardless of whether the Executive executes or revokes the Release.

8. Cause. The Company may immediately terminate the Executive's employment at any time for Cause upon written notice to the Executive, in which event all payments under this Agreement shall cease, except for any Accrued Obligations.

9. Voluntary Resignation Without Good Reason. The Executive may voluntarily terminate employment without Good Reason upon 30 days' prior written notice to the Company. In such event, after the effective date of such termination, no payments shall be due under this Agreement, except that the Executive shall be entitled to any Accrued Obligations.

10. Disability. If the Executive incurs a Disability during the Term, in accordance with applicable law, the Company may terminate the Executive's employment on or after the date of Disability. If the Executive's employment terminates on account of Disability, the Executive shall be entitled to receive any Accrued Obligations. For purposes of this Agreement, the term "Disability" shall mean the Executive is eligible to receive long-term disability benefits under the Company's long-term disability plan.

11. Death. If the Executive dies during the Term, the Executive's employment shall terminate on the date of death and the Company shall pay to the Executive's executor, legal representative, administrator or designated beneficiary, as applicable, any Accrued Obligations. Otherwise, the Company shall have no further liability or obligation under this Agreement to the Executive's executors, legal representatives, administrators, heirs or assigns or any other person claiming under or through the Executive.

12. Resignation of Positions. Effective as of the date of any termination of employment, the Executive will resign from all Company-related positions, including as an officer and director of the Company and its parents, subsidiaries and Affiliate, and shall execute all documentation necessary to effectuate such resignation(s).

13. Definitions. For purposes of this Agreement, the following terms shall have the following meanings:

(a) "Cause" shall mean a determination by the Board that the Executive (1) has breached this Agreement or any confidentiality, nonsolicitation, noncompetition or inventions assignment agreement or obligations with the Company; (2) committed an act of dishonesty, fraud, embezzlement or theft; (3) engaged in conduct that causes, or is likely to cause, material damage to the property or reputation of the Company; (4) failed to perform satisfactorily the material duties of the Executive's position (other than by reason of Disability) after receipt of a written warning from the Board; (5) committed a felony or any crime of moral turpitude; or (6) materially failed to comply with the Company's code of conduct or employment policies.

(b) "Good Reason" shall mean the occurrence of one or more of the following without the Executive's consent, other than on account of the Executive's Disability:

(1) A material diminution by the Company of the Executive's authority, duties or responsibilities;

(2) A material change in the geographic location at which the Executive must perform services under this Agreement (which, for purposes of this Agreement, means relocation

of the offices of the Company at which the Executive is principally employed to a location that increases the Executive's commute to work by more than 50 miles);

(3) A material diminution in the Executive's Base Salary, other than a general reduction in Base Salary that affects all similarly-situated executives in substantially the same proportions;

(4) Any action or inaction that constitutes a material breach by the Company of this Agreement; or

(5) The Company elects not to renew the Term of this Agreement at the end of the Term pursuant to Section 1(a) above for any reason other than Cause or Disability and does not offer the Executive continued employment on substantially similar terms as set forth in this Agreement.

The Executive must provide written notice of termination for Good Reason to the Company within 30 days after the event constituting Good Reason. The Company shall have a period of 30 days in which it may correct the act or failure to act that constitutes the grounds for Good Reason as set forth in the Executive's notice of termination. If the Company does not correct the act or failure to act, the Executive's employment will terminate for Good Reason on the first business day following the Company's 30-day cure period. If the Executive does not provide written notice of termination for Good Reason to the Company within 30 days after an event constituting Good Reason, then the Executive will be deemed to have waived the Executive's right to terminate for Good Reason with respect to such event.

(c) "Release" shall mean a separation agreement and general release of any and all claims against the Company and all related parties with respect to all matters arising out of the Executive's employment by the Company, and the termination thereof (other than claims for any entitlements under the terms of this Agreement or under any plans or programs of the Company under which the Executive has accrued and is due a benefit). The Release will be in a standard form acceptable to the Company.

14. Section 409A.

(a) This Agreement is intended to comply with section 409A of the Internal Revenue Code of 1986, as amended (the "Code"), and its corresponding regulations, or an exemption thereto, and payments may only be made under this Agreement upon an event and in a manner permitted by section 409A of the Code, to the extent applicable. Severance benefits under this Agreement are intended to be exempt from section 409A of the Code under the "short-term deferral" exception, to the maximum extent applicable, and then under the "separation pay" exception, to the maximum extent applicable. Notwithstanding anything in this Agreement to the contrary, if required by section 409A of the Code, if the Executive is considered a "specified employee" for purposes of section 409A of the Code and if payment of any amounts under this Agreement is required to be delayed for a period of six months after separation from service pursuant to section 409A of the Code, payment of such amounts shall be delayed as required by section 409A of the Code, and the accumulated amounts shall be paid in a lump-sum payment within 10 days after the end of the six-month period. If the Executive dies during the

postponement period prior to the payment of benefits, the amounts withheld on account of section 409A of the Code shall be paid to the personal representative of the Executive's estate within 60 days after the date of the Executive's death.

(b) All payments to be made upon a termination of employment under this Agreement may only be made upon a "separation from service" under section 409A of the Code. For purposes of section 409A of the Code, each payment hereunder shall be treated as a separate payment, and the right to a series of installment payments under this Agreement shall be treated as a right to a series of separate payments. In no event may the Executive, directly or indirectly, designate the fiscal year of a payment. Notwithstanding any provision of this Agreement to the contrary, in no event shall the timing of the Executive's execution of the Release, directly or indirectly, result in the Executive's designating the fiscal year of payment of any amounts of deferred compensation subject to section 409A of the Code, and if a payment that is subject to execution of the Release could be made in more than one taxable year, payment shall be made in the later taxable year.

(c) All reimbursements and in-kind benefits provided under this Agreement shall be made or provided in accordance with the requirements of section 409A of the Code, including, where applicable, the requirement that (i) any reimbursement be for expenses incurred during the period specified in this Agreement, (ii) the amount of expenses eligible for reimbursement, or in-kind benefits provided, during a fiscal year not affect the expenses eligible for reimbursement, or in-kind benefits to be provided, in any other fiscal year, (iii) the reimbursement of an eligible expense be made no later than the last day of the fiscal year following the year in which the expense is incurred, and (iv) the right to reimbursement or in-kind benefits not be subject to liquidation or exchange for another benefit.

15. Restrictive Covenants.

(a) Noncompetition. The Executive agrees that during the Executive's employment with the Company and its Affiliates and the one-year period following the date on which the Executive's employment terminates for any reason (the "Restriction Period"), the Executive will not, without the Board's express written consent, engage (directly or indirectly) in any Competitive Business in the Restricted Area. The term "Competitive Business" means the development or sale of oncolytic immunotherapies for the treatment of cancer. The term "Restricted Area" means the United States of America, Canada and countries within Europe, in respect of which: (1) the Company or any of its Affiliates has material business operations as of the date on which the Executive's employment terminates; or (2) the Executive had direct or indirect responsibility or received Proprietary Information during the Executive's employment or service with the Company. The Executive understands and agrees that, given the nature of the business of the Company and its Affiliates (as defined below) and the Executive's position with the Company, the foregoing geographic scope is reasonable and appropriate and that more limited geographical limitations on this non-competition covenant are therefore not appropriate. For purposes of this Agreement, the term "Affiliate" means any subsidiary of the Company or other entity under common control with the Company.

(b) Nonsolicitation of Company Personnel. The Executive agrees that during the Restriction Period, the Executive will not, either directly or through others, hire or attempt to hire

any employee, consultant or independent contractor of the Company or its Affiliates, or solicit or attempt to solicit any such person to change or terminate his or her relationship with the Company or an Affiliate or otherwise to become an employee, consultant or independent contractor to, for or of any other person or business entity, unless more than 12 months shall have elapsed between the last day of such person's employment or service with the Company or Affiliate and the first day of such solicitation or hiring or attempt to solicit or hire. If any employee, consultant or independent contractor is hired or solicited by any entity that has hired or agreed to hire the Executive, such hiring or solicitation shall be conclusively presumed to be a violation of this subsection (b).

(c) Nonsolicitation of Business Partners. The Executive agrees that during the Restriction Period, the Executive will not, either directly or through others, solicit, divert or appropriate, or attempt to solicit, divert or appropriate for the benefit of a Competitive Business, any (1) business partner or (2) prospective business partner of the Company or an Affiliate who is or was identified through leads developed during the course of the Executive's employment or service with the Company, in each case, with whom the Executive was involved as part of the Executive's job responsibilities during the Executive's employment or service with the Company, or regarding whom the Executive learned Proprietary Information during the Executive's employment or service with the Company.

(d) Proprietary Information. At all times, the Executive will hold in strictest confidence and will not disclose, use, lecture upon or publish any of the Proprietary Information (defined below) of the Company or an Affiliate, except as such disclosure, use or publication may be required in connection with the Executive's work for the Company or as described in Section 15(e) below, or unless the Company expressly authorizes such disclosure in writing. "Proprietary Information" shall mean any and all confidential and/or proprietary knowledge, data or information of the Company and its Affiliates and shareholders, including but not limited to information relating to financial matters, investments, budgets, business plans, marketing plans, personnel matters, business contacts, products, processes, know-how, designs, methods, improvements, discoveries, inventions, ideas, data, programs, and other works of authorship. Proprietary Information does not include information which (1) was disclosed in response to a valid order by a court or other governmental body, where the Executive provided the Company with prior written notice of such disclosure, (2) was or becomes generally available to the public other than as a result of disclosure by the Executive or any of the Executive's agents, advisors or representatives, (3) was within the Executive's possession prior to its being furnished to the Executive by or on behalf of the Company, provided that the source of the information was not bound by a confidentiality agreement with the Company or otherwise prohibited from transmitting the information to Executive by a contractual, legal or fiduciary obligation, or (4) was or becomes available to the Executive on a non-confidential basis from a source other than the Company or its representatives, provided that such source is not bound by a confidentiality agreement with the Company or otherwise prohibited from transmitting the information to the Executive by a contractual, legal or fiduciary obligation..

(e) Reports to Government Entities. Nothing in this Agreement shall prohibit or restrict the Executive from initiating communications directly with, responding to any inquiry from, providing testimony before, providing confidential information to, reporting possible violations of law or regulation to, or filing a claim or assisting with an investigation directly with

a self-regulatory authority or a government agency or entity, including the Equal Employment Opportunity Commission, the Department of Labor, the National Labor Relations Board, the Department of Justice, the Securities and Exchange Commission, Congress, any agency Inspector General or any other federal, state or local regulatory authority (collectively, the "Regulators"), or from making other disclosures that are protected under the whistleblower provisions of state or federal law or regulation. The Executive does not need the prior authorization of the Company to engage in conduct protected by this subsection, and the Executive does not need to notify the Company that the Executive has engaged in such conduct. Please take notice that federal law provides criminal and civil immunity to federal and state claims for trade secret misappropriation to individuals who disclose trade secrets to their attorneys, courts, or government officials in certain, confidential circumstances that are set forth at 18 U.S.C. §§ 1833(b)(1) and 1833(b)(2), related to the reporting or investigation of a suspected violation of the law, or in connection with a lawsuit for retaliation for reporting a suspected violation of the law.

(f) Work Made for Hire; Inventions Assignment. The Executive agrees that all inventions, innovations, improvements, developments, methods, designs, analyses, reports, and all similar or related information which relates to the Company's or its Affiliates' actual or anticipated business, research and development or existing or future products or services and which are conceived, developed or made by the Executive while employed by the Company ("Work Product") belong to the Company. The Executive acknowledges that, by reason of being employed by the Company at the relevant times, to the extent permitted by law, all of the Work Product consisting of copyrightable subject matter is "work made for hire" as defined in 17 U.S.C. § 101 and such copyrights are therefore owned by the Company. To the extent that the foregoing does not apply, the Executive hereby irrevocably assigns to the Company, for no additional consideration, the Executive's entire right, title, and interest in and to all Work Product and intellectual property rights therein, including, without limitation, the right to sue, counterclaim, and recover for all past, present, and future infringement, misappropriation, or dilution thereof, and all rights corresponding thereto throughout the world. The Executive will promptly disclose such Work Product to the Board and perform all actions reasonably requested by the Board (whether during or after the Term) to establish and confirm such ownership (including, without limitation, executing assignments, consents, powers of attorney and other instruments). If requested by the Company, the Executive agrees to execute any inventions assignment and confidentiality agreement that is required to be signed by Company employees generally. Nothing contained in this Agreement shall be construed to reduce or limit the Company's rights, title, or interest in any Work Product or intellectual property rights so as to be less in any respect than that the Company would have had in the absence of this Agreement. The Executive understands that this Agreement does not, and shall not be construed to, grant the Executive any license or right of any nature with respect to any Work Product or intellectual property rights or any Proprietary Information, materials, software, or other tools made available to the Executive by the Company.

(g) Return of Company Property. Upon termination of the Executive's employment with the Company for any reason, and at any earlier time the Company requests, the Executive will (1) deliver to the person designated by the Company all originals and copies of all documents and property of the Company or an Affiliate that is in the Executive's possession or under the Executive's control or to which the Executive may have access, (2) deliver to the

person designated by the Company all Company property, including keys, key cards, access cards, identification cards, security devices, employer credit cards, network access devices, computers, cell phones, smartphones, PDAs, pagers, fax machines, equipment, manuals, reports, files, books, compilations, work product, e-mail messages, recordings, disks, thumb drives or other removable information storage devices, hard drives, and data, and (3) to the extent that the Executive made use of the Executive's personal electronics (e.g., laptop, iPad, telephone, thumb drives, etc.) during employment with the Company, permit the Company to delete all Company property and information from such personal devices. The Executive will not reproduce or appropriate for the Executive's own use, or for the use of others, any property, Proprietary Information or Work Product.

16. Legal and Equitable Remedies.

(a) Because the Executive's services are personal and unique and the Executive has had and will continue to have access to and has become and will continue to become acquainted with the Proprietary Information of the Company and its Affiliates, and because any breach by the Executive of any of the restrictive covenants contained in Section 15 would result in irreparable injury and damage for which money damages would not provide an adequate remedy, the Company shall have the right to enforce Section 15 and any of its provisions by injunction, specific performance or other equitable relief, without bond and without prejudice to any other rights and remedies that the Company may have for a breach, or threatened breach, of the restrictive covenants set forth in Section 15. The Executive agrees that in any action in which the Company seeks injunction, specific performance or other equitable relief, the Executive will not assert or contend that any of the provisions of Section 15 are unreasonable or otherwise unenforceable.

(b) The Executive irrevocably and unconditionally (1) agrees that any legal proceeding arising out of this Agreement shall be brought solely in the United States District Court for the District of Massachusetts, or if such court does not have jurisdiction or will not accept jurisdiction, in any court of general jurisdiction in the State of Massachusetts, (2) consents to the exclusive jurisdiction of such court in any such proceeding, and (3) waives any objection to the laying of venue of any such proceeding in any such court. The Executive also irrevocably and unconditionally consents to the service of any process, pleadings, notices or other papers.

(c) Notwithstanding anything in this Agreement to the contrary, if the Executive breaches any of the Executive's obligations under Section 15, the Company shall be obligated to provide only the Accrued Obligations, and all payments under Section 2, Section 6, or Section 7 hereof, as applicable, shall cease. In such event, and in addition to any legal and equitable remedies permitted by law, the Company may require that the Executive repay all amounts theretofore paid to him pursuant to Sections 6 and 7 hereof (other than Sections 6(c) and 7(c)), and in such case, the Executive shall promptly repay such amounts on the terms determined by the Company.

17. Survival. The respective rights and obligations of the parties under this Agreement (including, but not limited to, under Sections 15 and 16) shall survive any termination of the Executive's employment or termination or expiration of this Agreement to the extent necessary to the intended preservation of such rights and obligations.

18. No Mitigation or Set-Off. In no event shall the Executive be obligated to seek other employment or take any other action by way of mitigation of the amounts payable to the Executive under any of the provisions of this Agreement, and such amounts shall not be reduced regardless of whether the Executive obtains other employment. The Company's obligation to make the payments provided for in this Agreement and otherwise to perform its obligations hereunder shall not be affected by any circumstances, including, without limitation, any set-off, counterclaim, recoupment, defense or other right which the Company may have against the Executive or others.

19. Section 280G. In the event of a change in ownership or control under section 280G of the Code, if it shall be determined that any payment or distribution in the nature of compensation (within the meaning of section 280G(b)(2) of the Code) to or for the benefit of the Executive, whether paid or payable or distributed or distributable pursuant to the terms of this Agreement or otherwise (a "Payment"), would constitute an "excess parachute payment" within the meaning of section 280G of the Code, the aggregate present value of the Payments under the Agreement shall be reduced (but not below zero) to the Reduced Amount (defined below) if and only if the Accounting Firm (described below) determines that the reduction will provide the Executive with a greater net after-tax benefit than would no reduction. No reduction shall be made unless the reduction would provide Executive with a greater net after-tax benefit. The determinations under this Section shall be made as follows:

(a) The "Reduced Amount" shall be an amount expressed in present value which maximizes the aggregate present value of Payments under this Agreement without causing any Payment under this Agreement to be subject to the Excise Tax (defined below), determined in accordance with section 280G(d)(4) of the Code. The term "Excise Tax" means the excise tax imposed under section 4999 of the Code, together with any interest or penalties imposed with respect to such excise tax.

(b) Payments under this Agreement shall be reduced on a nondiscretionary basis in such a way as to minimize the reduction in the economic value deliverable to the Executive. Where more than one payment has the same value for this purpose and they are payable at different times, they will be reduced on a pro rata basis. Only amounts payable under this Agreement shall be reduced pursuant to this Section.

(c) All determinations to be made under this Section shall be made by an independent certified public accounting firm selected by the Company and agreed to by the Executive immediately prior to the change-in-ownership or -control transaction (the "Accounting Firm"). The Accounting Firm shall provide its determinations and any supporting calculations both to the Company and the Executive within 10 days of the transaction. Any such determination by the Accounting Firm shall be binding upon the Company and the Executive. All of the fees and expenses of the Accounting Firm in performing the determinations referred to in this Section shall be borne solely by the Company.

20. Notices. All notices and other communications required or permitted under this Agreement or necessary or convenient in connection herewith shall be in writing and shall be deemed to have been given when hand delivered or mailed by registered or certified mail, as follows (provided that notice of change of address shall be deemed given only when received):

If to the Company, to:

Replimune, Inc.
18 Commerce Way
Woburn, MA 01801
Attn: General Counsel

with a copy to:

Morgan, Lewis & Bockius LLP
One Federal Street
Boston, MA 02110
Attn: Gitte Blanchet

If to the Executive, to the most recent address on file with the Company or to such other names or addresses as the Company or the Executive, as the case may be, shall designate by notice to each other person entitled to receive notices in the manner specified in this Section.

21. Withholding. All payments under this Agreement shall be made subject to applicable tax withholding, and the Company shall withhold from any payments under this Agreement all federal, state and local taxes as the Company is required to withhold pursuant to any law or governmental rule or regulation. The Executive shall bear all expense of, and be solely responsible for, all federal, state and local taxes due with respect to any payment received under this Agreement.

22. Remedies Cumulative; No Waiver. No remedy conferred upon a party by this Agreement is intended to be exclusive of any other remedy, and each and every such remedy shall be cumulative and shall be in addition to any other remedy given under this Agreement or now or hereafter existing at law or in equity. No delay or omission by a party in exercising any right, remedy or power under this Agreement or existing at law or in equity shall be construed as a waiver thereof, and any such right, remedy or power may be exercised by such party from time to time and as often as may be deemed expedient or necessary by such party in its sole discretion.

23. Assignment. All of the terms and provisions of this Agreement shall be binding upon and inure to the benefit of and be enforceable by the respective heirs, executors, administrators, legal representatives, successors and assigns of the parties hereto, except that the duties and responsibilities of the Executive under this Agreement are of a personal nature and shall not be assignable or delegable in whole or in part by the Executive. The Company may assign its rights, together with its obligations hereunder, in connection with any sale, transfer or other disposition of all or substantially all of its business and assets, and such rights and obligations shall inure to, and be binding upon, any successor to the business or any successor to substantially all of the assets of the Company, whether by merger, purchase of stock or assets or otherwise, which successor shall expressly assume such obligations, and the Executive acknowledges that in such event the obligations of the Executive hereunder, including but not limited to those under Section 15, will continue to apply in favor of the successor.

24. Company Policies. This Agreement and the compensation payable hereunder shall be subject to any applicable clawback or recoupment policies, share trading policies, and other policies that may be implemented by the Board from time to time with respect to officers of the Company.

25. Indemnification. In the event the Executive is made, or threatened to be made, a party to any legal action or proceeding, whether civil or criminal, including any governmental or regulatory proceedings or investigations, by reason of the fact that the Executive is or was a director or officer of the Company or any of its Affiliates, the Executive shall be indemnified by the Company, and the Company shall pay the Executive's related expenses when and as incurred, to the fullest extent permitted by applicable law and the Company's articles of incorporation and bylaws. During the Executive's employment with the Company or any of its Affiliates and after termination of employment for any reason, the Company shall cover the Executive under the Company's directors' and officers' insurance policy applicable to other officers and directors according to the terms of such policy.

26. Entire Agreement; Amendment. This Agreement sets forth the entire agreement of the parties hereto and supersedes any and all prior agreements and understandings concerning the Executive's employment by the Company, including, without limitation, the offer letter dated May 25, 2017 from the Company to the Executive; provided, however that the Replimune, Inc. At-Will Employment, Confidential Information, Invention Assignment, and Arbitration Agreement, dated November 6, 2017, shall continue in full force and effect and the terms of which are hereby incorporated by reference. This Agreement may be changed only by a written document signed by the Executive and the Company.

27. Severability. If any provision of this Agreement or application thereof to anyone or under any circumstances is adjudicated to be invalid or unenforceable in any jurisdiction, such invalidity or unenforceability shall not affect any other provision or application of this Agreement, which can be given effect without the invalid or unenforceable provision or application, and shall not invalidate or render unenforceable such provision or application in any other jurisdiction. If any provision is held void, invalid or unenforceable with respect to particular circumstances, it shall nevertheless remain in full force and effect in all other circumstances.

28. Governing Law. This Agreement shall be governed by, and construed and enforced in accordance with, the substantive and procedural laws of Massachusetts without regard to rules governing conflicts of law.

29. Counterparts. This Agreement may be executed in any number of counterparts (including facsimile counterparts), each of which shall be an original, but all of which together shall constitute one instrument.

(Signature Page Follows)

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

REPLIMUNE, INC.

/s/ Robert Coffin

Name: Robert Coffin
Title: CEO
Date: 22 June 2018

EXECUTIVE

/s/ Howard Kaufman

Name: Howard Kaufman

Date: June 22, 2018

Exhibit 10.9

Agreed form

THIS AGREEMENT is made on 16 September 2015

BETWEEN:

(1) **REPLIMUNE LIMITED** (registered number 09496393) whose registered office is at The Magdalen Centre, Oxford Science Park, Robert Robinson Avenue, Oxford, OX4 4GA (the "**Company**"); and

(2) **COLIN LOVE** of 20 Woodhurst Road, Maidenhead, Berkshire SL6 8TF (the "**Executive**").

IT IS AGREED as follows:

1. Definitions and Interpretation

1.1 In this Agreement the following words and expressions shall have the following meanings:

"**Act**" means the Employment Rights Act 1996;

"**Board**" means the board of directors of the Company from time to time;

"**Business**" means the business of the Company from time to time, including in particular the pre-clinical and clinical development of oncolytic immunotherapies;

"**Cause**" means the occurrence any of the matters set out in subclauses 10.2.1 to 10.2.8 below;

"**Change of Control**" means the occurrence of any of the following after the Effective Date:

(a) one person (or more than one person acting as a group) acquires ownership of shares in the Company that, together with the shares held by such person or group, constitutes more than 50% of the total fair market value or total voting power of the shares in the Company; provided that, a Change in Control shall not occur if any person (or more than one person acting as a group) owns more than 50% of the total fair market value or total voting power of the Company's shares and acquires additional shares;

(b) a majority of the members of the Board are replaced during any twelve-month period by directors whose appointment or election is not endorsed by a majority of the Board before the date of appointment or election; or

(c) the sale of all or substantially all of the Company's assets.

"**Commencement Date**" means the date of this Agreement;

"**Financial Year**" has the meaning ascribed to it in section 390 of the Companies Act 2006;

"**Good Reason**" means that the Executive has complied with the Good Reason Process following the occurrence of any of the following, in each case during the term of the Executive's employment under this Agreement:

(a) a material diminution in the Executive's Base Salary of at least ten (10) percent, except for across-the-board salary reductions based on the Company's financial performance similarly affecting all or substantially all senior management employees of the Company;

(b) a material change of more than fifty (50) miles in the geographic location at which the Executive provides services to the Company;

(c) the material breach of this Agreement by the Company; or

(d) a material adverse change in the Executive's title, authority, duties, or reporting structure (other than temporarily while the Executive is physically or mentally incapacitated or as required by applicable law).

"**Good Reason Process**" means that:

(a) the Executive reasonably determines in good faith that a Good Reason condition has occurred;

(b) the Executive notifies the Board in writing of the first occurrence of the Good Reason condition within sixty (60) days of the first occurrence of such condition;

(c) the Executive cooperates in good faith with the Board's efforts, for a period not less than thirty (30) days following such notice (the "**Cure Period**"), to remedy the condition;

(d) notwithstanding such efforts, the Good Reason condition continues to exist; and

(e) the Executive terminates his employment within sixty (60) days after the end of the Cure Period. If the Company cures the Good Reason condition during the Cure Period, Good Reason shall be deemed not to have occurred.

"**Group Company**" means any company which is the parent undertaking or a subsidiary undertaking of the Company or other subsidiary undertaking of the Company's parent undertaking from time to time where the expressions "subsidiary undertaking" and "parent undertaking" have the meanings given to them by section 1162 Companies Act 2006;

"**Key Executive**" means any employee, contractor or advisor who is or was employed or engaged by the Company or any Group Company:

(a) in the case of an employee as a Director or at management grade; or

(b) in a senior capacity with a basic salary equivalent to at least $75,000 each year;

"**Lookback Period**" means the period of one year immediately preceding the Termination Date;

"**Restricted Area**" means countries within Europe, Canada and the United States of America in respect of which: (i) any Restricted Company has or had material business operations as at the Termination Date; or (ii) the Employee had direct or indirect responsibility or received confidential information of or relating to the Company or its Business during the Period;

"**Restricted Company**" means any Group Company with which the Employee shall have been engaged or involved or about or in respect of which he received confidential information (of or relating to such company or its business) at any time during the Lookback Period;

"**Restricted Period**" means

(a) if the Executive's employment hereunder is terminated by the Executive for Good Reason or by the Company without Cause, a period of 12 months commencing on the Termination Date; or

(b) if the Executive's employment hereunder is terminated by the Executive without Good Reason or by the Company for Cause, a period of 24 months commencing on the Termination Date; and

"**Termination Date**" means the date on which the employment of the Executive under this Agreement shall terminate for whatever reason.

1.2 References to any statute, statutory instrument or any statutory provision shall be construed as references to the statute, statutory instrument or statutory provision as in force at the date of this Agreement and as subsequently re-enacted, consolidated or amended and shall include references to any statute, statutory instrument or any statutory provision of which it is a re-enactment, consolidation or amendment.

1.3 A word importing one gender shall (where appropriate) include any other gender and a word importing the singular shall (where appropriate) include the plural and vice versa.

1.4 The Schedules to this Agreement are an integral part of this Agreement and references to this Agreement shall include reference thereto.

1.5 The headings in this Agreement are for convenience only and shall not affect the interpretation of any provision of this Agreement.

1.6 The various clauses of this Agreement are severable and if any clause or identifiable part is held to be invalid or unenforceable by any court of competent jurisdiction then such invalidity or unenforceability shall not affect

the validity or enforceability of the remaining clauses or identifiable parts in this Agreement.

2. APPOINTMENT AND TERM

2.1 The Executive's employment with the Company shall commence on the Commencement Date. The Executive shall serve as Chief Operating Officer and report to the Chief Executive Officer of the Company. No employment with a previous employer shall count as part of the Executive's continuous period of employment with the Company.

2.2 The Executive's employment shall continue (subject to the provisions of this Agreement) until terminated by either party giving to the other not less than six months' notice in writing.

2.3 The Executive represents to the Company that he is entitled to enter into this Agreement and to implement and carry out its terms and that by so doing he shall not be in breach of any obligation (contractual or otherwise) to any third party which would entitle that third party to damages or any other remedy at law.

2.4 The Executive warrants that he is entitled to work in the UK and will notify the Company immediately in writing if he ceases to be so entitled (or his UK immigration status changes, if applicable) at any time during his employment with the Company. The Executive will provide original documents to the Company prior to the commencement of his employment evidencing his right to work in the UK. If he has held a UK immigration status he will also be required to provide the Company with his original documents evidencing his ongoing right to work in the UK from time-to-time and if he changes his UK immigration status he shall provide his original documents evidencing his new status to the Company immediately.

2.5 The Executive will keep the Company informed of his current address, home telephone number and mobile number at all times. If the Executive's details change he will inform the Company immediately in writing.

3. DUTIES AND PLACE OF WORK

3.1 The Executive shall during the continuance of his employment:

3.1.1 serve the Company and each Group Company to the best of his ability;

3.1.2 faithfully and diligently perform such duties and exercise such powers consistent with them as the Board (or anyone authorised by the Board) may from time to time properly assign to or confer upon the Executive;

3.1.3 do all reasonably in his power to protect, promote, develop and extend the business interests and reputation of the Company and each Group Company;

3.1.4 at all times and in all respects conform to and comply with the lawful and reasonable directions of the Board;

3.1.5 keep the Board promptly and fully informed (in writing if so requested) of all such information, explanations and assistance as it may require in connection with the business or affairs of the Company and any Group Company and provide such explanations of his conduct as the Board may require; and

3.1.6 unless prevented by sickness, injury or other incapacity or as otherwise agreed by the Board devote the whole of his time, ability and attention to his duties under this Agreement during normal office hours and at such other times as may be necessary for the proper performance of his duties.

3.2 The Board shall be entitled at any time to require the Executive to perform services which may be outside his normal duties not only for the Company but also for any Group Company without any entitlement to additional remuneration arising.

3.3 The Executive shall promptly disclose to the Board any misconduct or breach of duty on his part and any information that comes into his possession which adversely affects or may adversely affect the Company or any Group Company or the business of the Company or any Group Company including, but not limited to:

3.3.1 the plans of any other senior employee to leave the Company or any Group Company (whether alone or in concert with any other employee), including, but not limited to, the plans of such an employee to join a competitor or to establish a business in competition with the Company or any Group Company; and

3.3.2 the misuse by any employee of any confidential information belonging to the Company or any Group Company; and

3.3.3 the conduct of any employee, agent or service provider which constitutes bribery within the meaning of the Bribery Act 2010.

3.4 Subject always to clause 4, during the Term the Executive shall not without the prior written consent of the Board engage in any activities, public office or other occupation outside his employment which may detract from the proper and timely performance of his duties under this Agreement.

3.5 The Executive's principal place of work shall be at The Magdalen Centre Oxford Science Park, Robert Robinson Avenue, Oxford, OX4 4GA or such other location as may be required by the Board from time to time (whether on a permanent or temporary basis) and he shall undertake any travel (within the United Kingdom or abroad) as may be necessary for the proper performance of his duties. There are no additional terms which apply where the Executive is required to work outside the UK for a period of more than one month.

4. CONFLICTS OF INTEREST AND SHARE DEALINGS

4.1 During the Term, the Executive shall not whether alone or jointly with or on behalf of any other person, firm or company and whether as principal, partner, manager, employee, contractor, director, consultant, investor or otherwise (except as a representative or nominee of the Company or any Group Company or otherwise with the prior consent in writing of the Board) be, or make preparations to be, engaged, concerned or interested in any other business, activity or undertaking which is or will be or is likely to be in competition with any business carried on by the Company or any Group Company provided that the Executive may hold (directly or through nominees) by way of bona fide personal investment any units of any authorised unit trust and up to five per cent of the issued shares, debentures or other securities of any class of any company whose shares are listed on a recognised investment exchange within the meaning of section 285 of the Financial Services and Markets Act 2000 ("**FSMA**") or dealt in on AIM, a market operated by the London Stock Exchange, or any such other exchange as may be specified by the Board from time to time.

4.2 The Executive shall not during his employment introduce to or plan or attempt to introduce to any other person, firm, company or organisation, business of any kind with which the Company, or any Group Company for which he has performed services under this agreement, is able to deal, and he shall not have any financial interest in, or derive any financial or other benefit from, contracts or transactions entered into by the Company, or any Group Company for which he has performed services under this Agreement, with any third party, without first disclosing such interest or benefit to the Board and obtaining its written approval.

4.3 The Executive shall at all times comply with any personal account dealing rules adopted from time to time by the Company for directors of the Company and any Group Company and their employees.

4.4 The Executive shall at all times comply with any measures adopted by the Company from time to time to prevent bribery and corruption and shall use all reasonable endeavours to ensure that no person acting on behalf of the Company commits any act of bribery within the meaning of the Bribery Act 2010.

5. SALARY AND BONUS

5.1 The Executive shall receive a fixed annual salary of £185,000 which shall accrue from day to day and be payable by equal monthly instalments in arrears on or before the last day of each calendar month (less deductions for tax as required by law) inclusive of any directors' fees payable to the Executive. The Executive's fixed annual salary shall be reviewed annually by the Board. There is no obligation to award an increase.

5.2 In addition to the Executive's fixed annual salary, the Company may in its absolute discretion pay him a bonus of such amount (not to exceed 30% of the Executive's fixed annual salary) and at such intervals as the Company may in

its absolute discretion determine, taking into account specific performance targets as may be notified to the Executive from time to time. Any bonus payment shall be purely discretionary and shall not form part of the Executive's contractual remuneration under this Agreement. If the Company makes a bonus payment to the Executive in respect of a Financial Year, it shall not be obliged to make subsequent bonus payments in respect of any subsequent Financial Year. The Company may alter the terms of any bonus targets or withdraw them altogether at any time without prior notice. The Executive shall in any event have no right to a bonus (or a pro-rated bonus) if his employment terminates for any reason or he is under notice of termination (whether given by or received by him) at or prior to the date when a bonus might otherwise have been payable. Any bonus payment shall not be pensionable.

6. PENSION AND OTHER BENEFITS

6.1 The Executive is not currently eligible for membership of any pension scheme or other benefit scheme by reason of his employment with the Company.

6.2 The Company will comply with its obligations under the Pensions Act 2008 from the date when these apply to the Executive. If these obligations apply, the Company may be required to automatically enrol the Executive into a qualifying pension scheme and to deduct minimum pension contributions from his salary.

6.3 In the event that the Company does offer the Executive membership of a benefit scheme, the available benefits shall be subject to the rules of the relevant scheme from time to time in force. The Company reserves the right to substitute another provider of any of the benefits available or alter the benefits available to the Executive at any time. No liability shall accrue to the Company in the event that insurance cover is refused by the provider or any conditions or limitations to the benefit are applied by the provider. The Company's sole obligations in respect of any such insurance benefits are to pay the premium from time to time required by the provider and to pay to the Executive such sums (if any) as may from time to time be received by the Company from the provider in respect of any claim made by the Executive under the scheme, and, for the avoidance of doubt, the Company shall be under no obligation to take any action to enforce the terms of any insurance or otherwise to procure the benefit of any insurance for the Executive.

7. HOLIDAYS

7.1 The Executive is entitled (in addition to the usual public and bank holidays in England and Wales) to 25 days' holiday during each holiday year. The Company's holiday year runs between January and December. The Executive will be paid his normal basic salary during such holidays. If the Executive's employment commences part way through the holiday year, his holiday entitlement during his first year of employment shall be calculated on a pro-rata basis, rounded up to the nearest whole day.

7.2 All holidays must be agreed in advance with the Company and in addition to this requirement the Executive shall give notice of at least twice the length of his proposed holiday period.

7.3 The Executive is not entitled to carry over any untaken holiday under clause 7.1 above into the next holiday year, unless a period of statutory maternity, paternity or adoption leave prevents him from taking it in the relevant year or where it is agreed in writing by his line manager.

7.4 On termination of the Executive's employment he shall be entitled to be paid in lieu of holiday accrued under clause 7.1 above but untaken as at the termination. The amount of the payment in lieu shall be calculated on the basis that each day of paid holiday is equal to 1/260 of the Executive's normal remuneration.

7.5 If the Executive has taken more holiday than his accrued entitlement at the date of termination of his employment, the Company shall be entitled to deduct the appropriate amount from any payments due to him (which deduction shall be on the basis that each day of paid holiday is equal to 1/260 of his basic salary).

7.6 The Company may require the Executive to take any outstanding holiday entitlement during his notice period.

8. HOURS OF WORK

8.1 The Executive's normal hours of work are between 9.30 am and 5.30 pm Monday to Friday inclusive with a lunch break of one hour (or such other hours of work as may be agreed between the Executive and the Board). The Executive may be required to work additional hours

to the extent necessary for the proper performance of his work. The Executive will not be entitled to extra remuneration for any such additional hours.

8.2 Attached at Schedule 2 to this Agreement, is an opt-out agreement for the purposes of the Working Time Regulations 1998. The effect of signing the opt-out form, is to confirm that, until notice in accordance with the opt-out terms is given, his employment will not be covered by the 48 hour per week maximum limit on working hours imposed by the Regulations. The Executive is requested to sign the opt-out attached to this Agreement.

8.3 The Executive is required at all times to comply with our rules, policies and procedures in force from time to time.

9. INCAPACITY

9.1 If the Executive is absent from work for any reason, he must notify the Company of the reason for his absence as soon as possible on the first day of absence.

9.2 In all cases of absence, a self-certification form must be completed on the Executive's return to work and given to his line manager.

9.3 For any period of incapacity due to sickness or injury which lasts for seven consecutive days or more, a doctor's certificate stating the reason for absence must be obtained at the Executive's own cost and supplied to the Company. Further certificates must be obtained if the absence continues for longer than the period of the original certificate.

9.4 In the event of the Executive's absence due to sickness, the Executive agrees to consent to a medical examination (at the Company's expense) by a doctor nominated by the Company should the Company so require. The Executive agrees that any report produced in connection with any such examination may be disclosed to the Company and the Company may discuss the contents of the report with the relevant doctor.

9.5 If the Executive is absent from work due to sickness, the Company shall pay him statutory sick pay provided that he satisfies the relevant requirements. Any additional payments shall be in the absolute discretion of the Company. The Executive's qualifying days for statutory sick pay purposes are Monday to Friday.

10. TERMINATION

10.1 The Company may, in its sole and absolute discretion, terminate the Executive's employment at any time and with immediate effect. If the Company exercises its discretion to terminate the Executive's employment in this way, the Executive may be entitled to receive payment in lieu of notice ("**Payment in Lieu**"). This Payment in Lieu will be equal to the basic annual salary (as at the date of termination) which the Executive would have been entitled to receive under this Agreement during the six month notice period referred to at clause 2.2 (or, if notice has already been given, during the remainder of the notice period) less income tax and National Insurance contributions.

For the avoidance of doubt, the Payment in Lieu shall not include any element in relation to:

10.1.1 any bonus, incentive or commission payments that might otherwise have been due during the period for which the Payment in Lieu is made whether under clause 5.2 of this Agreement or otherwise;

10.1.2 any payment in respect of benefits which the Executive would have been entitled to receive during the period for which the Payment in Lieu is made; and

10.1.3 any payment in respect of any holiday entitlement that would have accrued during the period for which the Payment in Lieu is made.

10.2 Notwithstanding the provisions of clauses 2.2 and 10.1, the Company shall be entitled, by notifying the Executive in writing, to terminate this Agreement and the Executive's employment forthwith without any payment by way of compensation, damages, payment in lieu of notice or otherwise if the Executive shall:

10.2.1 commit any act of serious misconduct; or

10.2.2 commit any material or persistent breach of any of the terms or conditions of this Agreement including any willful neglect or refusal to carry out any of his duties or to comply with any lawful instruction given to him by the Board; or

10.2.3 have a bankruptcy order made against him or compound with or enter into any voluntary arrangements with his creditors; or

10.2.4 be charged with or convicted of any criminal offence (other than an offence under the Road Traffic Acts for which a penalty of imprisonment cannot be imposed); or

10.2.5 commit any act which constitutes an offence by the Executive or the Company under the Bribery Act 2010 whether done for the Company's benefit or not; or

10.2.6 act in any way which may in the reasonable opinion of the Board bring the Company or any Group Company into disrepute or discredit, or prejudice the interests of the Company or any Group Company; or

10.2.7 fail to comply in any material respect with any policy of the Company or any Group Company which has been communicated to him including without limitation any policy in respect of dealing in shares, anti-bribery and corruption, equal opportunities and harassment, data protection and use of email and the internet; or

10.2.8 enter into any transaction or behave in any other way which constitutes an offence for the purposes of Part V of the Criminal Justice Act 1993 or which constitutes market abuse for the purposes of Part VIII of FSMA,

in which event, for the purposes of this Agreement, the Termination Date shall be the date of the written notice terminating the Executive's employment.

10.3 The Executive shall, at the time of signing this Agreement, appoint the Company as his attorney by executing a Power of Attorney in the form set out in Schedule 1.

10.4 The exercise by the Company of its right of termination under clause 10.2 shall be without prejudice to any other rights or remedies which the Company or any Group Company may have or be entitled to exercise against the Executive.

10.5 If the employment of the Executive under this Agreement shall be terminated for the purpose of reconstruction or amalgamation only whether by reason of the liquidation of the Company or otherwise and he shall be offered employment with any concern or undertaking resulting from this reconstruction or amalgamation on terms and conditions no less favourable than the terms of this Agreement then the Executive shall have no claim

against the Company in respect of the termination of his employment hereunder.

10.6 The Executive shall not after the Termination Date represent himself as being employed by or connected with the Company or any Group Company.

10.7 If the Executive's employment is terminated by the Executive for Good Reason or by the Company without Cause he shall be paid a sum equal to 12 months of his fixed annual salary specified under clause 5.1, less any Payment in Lieu, payable in 12 equal monthly instalments following the Termination Date.

10.8 **Change of Control Termination.** Notwithstanding any other provision contained herein, if the Executive's employment is terminated by the Executive for Good Reason or by Company without Cause, within twenty four (24) months following a Change in Control, the Executive shall be entitled to receive a sum equal to 12 months of his fixed annual salary specified under clause 5.1, less any Payment in Lieu, which shall be payable within 30 days from the Termination Date. The amount payable under this clause 10.8 shall be in lieu of, not in addition to, any amount payable under clause 10.7.

11. GARDEN LEAVE

11.1 Despite any other provision in this Agreement, the Company is under no obligation to provide the Executive with work and may, if either party serves notice to terminate the Executive's employment or if the Executive purports to terminate his employment without due notice (and the Company has not accepted that resignation) or at such other time as the Company may reasonably consider appropriate:

11.1.1 require the Executive to perform (a) only a specified part of his normal duties and no other; (b) such duties as it may reasonably require and no others; or (c) no duties whatever; and

11.1.2 exclude the Executive from any premises of the Company or any Group Company for up to three months in total ("**Garden Leave**").

11.2 During any period of Garden Leave the Executive shall:

11.2.1 remain an Executive of the Company;

11.2.2 not, whether directly or indirectly, paid or unpaid, be engaged or concerned in the conduct of any other actual or perspective business or profession or be or become an Executive, agent, partner, consultant or director of any other person, company or firm or assist or have any financial interest in any such business or profession;

11.2.3 not have any contact or communication with any customer/client, supplier, or Executive, officer, director, agent or consultant of the Company or any Group Company;

11.2.4 keep the Company informed of his whereabouts so that he can be called upon to perform any appropriate duties as required by the Company;

11.2.5 take any holiday which has accrued under clause 7 during the Garden Leave period; and

11.2.6 continue to receive his salary and contractual benefits in the usual way.

12. EXECUTIVE'S COVENANTS

12.1 The Executive acknowledges that the provisions of this clause 12 are fair and reasonable and necessary to protect the legitimate business interests of the Company and each Group Company.

12.2 The period of time during which the restrictions referred to in clauses 12.4 to 12.6 shall apply following the Termination Date shall be reduced by the amount of time during which, if at all, the Company exercises all or any of its rights under clause 11.

12.3 The Executive agrees that in the event of him receiving from any person, company, business entity or other organisation an offer of employment or engagement either during the continuance of this Agreement or during the continuance in force of any of the restrictions set out in this clause 12, he will forthwith provide to such person, company, business entity or other organisation making the offer of employment or engagement a full and accurate copy of this Agreement signed by the parties hereto and will notify the Company of such offer of employment or engagement.

12.4 The Executive shall not during the Restricted Period within the Restricted Area carry on or be concerned, engaged or interested directly or indirectly in any capacity whatsoever in any trade or business competing with the Business in which he shall have been engaged or involved at any time during the Lookback Period;

12.5 The Executive shall not during the Restricted Period:

(i) either on his own behalf or in any other capacity whatsoever directly or indirectly do or say anything with the intention or effect of influencing any person to cease business with the Company or any Group Company on substantially the same terms as previously (or at all);

(ii) either on his own behalf or in any other capacity whatsoever directly or indirectly endeavour to entice away from the Company or any Group Company or solicit any person, firm or company who was a client, customer, supplier, agent or distributor of the Company or any Group Company during the Lookback Period

with whom he shall have been engaged or involved by virtue of his duties during the Lookback Period; or

(iii) either on his own behalf or in any other capacity whatsoever directly or indirectly employ, engage or induce, or seek to induce, to leave the service of the Company or any Group Company any person who is or was a Key Executive with whom he shall have had dealings during the Lookback Period whether or not such person would commit any breach of his contract of employment by reason of so leaving the service of the Company or Group Company.

12.6 The Executive shall not during the Restricted Period either on his own behalf or in any other capacity whatsoever directly or indirectly have any dealings with any person, firm or company who was a client, customer, supplier, agent or distributor of the Company or Group Company during the Lookback Period with whom he shall have been engaged or involved by virtue of his duties during the Lookback Period where such dealing may lead to any person ceasing to do business with the Company or the Group Company on substantially the same terms as previously (or at all).

12.7 Each of the restrictions contained in each sub-clause of 12.4 to 12.6 is separate and distinct and is to be construed separately from the other such restrictions. The Executive hereby acknowledges that he considers such restrictions to be reasonable both individually and in the aggregate and that the duration extent and application of each of such restrictions are no greater than is necessary for the protection of the legitimate business interests of the Company or any Group Company. If any such restriction shall be found to be void or unenforceable but would be valid or enforceable if some part or parts thereof were deleted or the period or area of application reduced, the Executive hereby agrees that such restriction shall apply with such modification as may be necessary to make it valid.

13. CONFIDENTIALITY

13.1 The Executive acknowledges that during his employment he shall in the performance of his duties become aware of trade secrets and other confidential information relating to the Company, the Group Companies, or their businesses and their past, current or prospective clients or customers and their businesses which shall include (without limitation) information expressly designated by the Company or any Group Company as being confidential and any other confidential information concerning their:

13.1.1 finances, business transactions, research activities, dealings and affairs and prospective business transactions, research activities, dealings and affairs (including, without limitation, the decisions of Board meetings);

13.1.2 customers, including, without limitation, customer lists, customer identity and customer requirements;

13.1.3 existing and planned product lines, price lists and pricing structures (including, without limitation, discounts, special prices or special contract terms offered to or agreed with customers);

13.1.4 technology underlying their concepts, products or services;

13.1.5 business plans and sales and marketing information, plans and strategies;

13.1.6 computer systems, source codes and software;

13.1.7 directors and employees; and

13.1.8 suppliers, licensors, agents, distributors or contractors (both current and those who were suppliers, licensors, licensees, agents, distributors or contractors during the previous two years).

13.2 Without prejudice to his general duties at common law in relation to such trade secrets and other confidential information, the Executive shall not (save as required by law) during his employment or at any time after the Termination Date disclose or communicate to any person or persons or make use of or copy (other than in the proper performance of his duties under this Agreement) and shall use his best endeavours to prevent any disclosure, communication or use by any other person of any such trade secrets or confidential information and all books, notes, memoranda, correspondence, papers, drawings, designs, documents, records, computer discs, computer hardware or computer software containing such trade secrets or confidential information, and shall not use to the detriment of the Company or any Group Company any information relating to the Company or any Group Company.

13.3 The provisions of clause 13.2 shall cease to apply to information or knowledge which comes into the public domain otherwise than by reason of the default of the Executive.

14. INTELLECTUAL PROPERTY RIGHTS

14.1 In this clause the following definition applies:

"**Intellectual Property Rights**" means patents and other rights in inventions, copyright and related rights, trademarks, trade and business names, domain names, design rights and registered designs, rights in get-up and goodwill, rights in know-how and confidential information, rights in computer software, topography rights and database rights in each case whether registered or unregistered and any other intellectual property rights or similar proprietary rights which may from time to time subsist in any part of the world and all applications for the grant of the foregoing for the full term of protection of such rights (including any renewals and extensions).

14.2 The Executive acknowledges that, to the fullest extent permitted by law, all Intellectual Property Rights originated or developed by the Executive (whether or not during working hours or using Company premises, equipment or other

resources) at any time during the term of the Executive's employment by the Company and which may be of use to the Company in the field of business in which the Company or any other Group Company operates at that time shall belong to the Company absolutely. To the extent that any Intellectual Property Rights to which the Company is entitled under this clause 14 do not automatically vest in the Company, the Executive shall hold them on trust for the Company.

14.3 The Executive shall, at the request and expense of the Company, forthwith execute such documents and do such things as may be considered necessary to enable the Company to register or otherwise obtain for its own benefit and in its own name any Intellectual Property Rights to which the Company may be entitled under this clause 14, together with any rights in internet domain names and to maintain, defend and enforce the Company's interest in any such Intellectual Property Rights and internet domain names.

14.4 The Executive hereby irrevocably waives any and all moral rights which he has or may become entitled to under the Copyright Designs and Patents Act 1988 (or any equivalent laws anywhere in the world) in relation to any existing or future works, the Intellectual Property Rights in which are vested in the Company pursuant to this clause 14.

15. COMPANY PROPERTY

15.1 All documents, manuals, hardware and software provided for the Executive's use by the Company, and any data or documents (including copies) produced, maintained or stored on the Company's computer systems or other electronic equipment (including mobile phones), remain the property of the Company.

15.2 Any Company property in the Executive's possession and any original or copy documents obtained by him in the course of his employment shall be returned to his line manager at any time on request and in any event prior to the termination of his employment with the Company.

16. DATA PROTECTION

16.1 The Executive confirms that he will comply with any data protection policy put in place by the Company or any Group Company from time to time when handling personal data in the course of his employment including, but not limited to, personal data relating to any employee of the Company or any Group Company or to any customer, client, supplier or agent of the Company or any Group Company.

16.2 The Executive hereby expressly consents to the Company and any Group Company processing his data for legal, personnel, administrative and management purposes and in particular to the processing of any sensitive personal data (as defined in the Data Protection Act 1998) relating to him, including, as appropriate:

16.2.1 information about the Executive's physical or mental health or condition in order to monitor sick leave and take decisions as to his fitness for work;

16.2.2 the Executive's racial or ethnic origin or religious or similar information in order to monitor compliance with equal opportunities legislation;

16.2.3 information relating to any criminal proceedings in which the Executive has been involved for insurance purposes and in order to comply with any policies of the Company or any Group Company from time to time in place and in order to comply with legal requirements and any obligations to third parties; and

16.2.4 any information required by the Company or any Group Company to assess the Executive's suitability at the beginning of the employment relationship and on an ongoing basis to be an employee of the Company, including background checks (which may comprise medical checks, financial checks and other verification and vetting) and drug screen results.

16.3 The Company and any Group Company may make the Executive's data available to any organisation that provides products or services to the Company and/or or any Group Company including, but not limited to, professional advisers, payroll administrators and IT service providers, regulatory authorities, potential or future employers, governmental or quasi-governmental organisations and potential purchasers of the Company and/or or any Group Company or the business in which the Executive works.

16.4 The Executive hereby expressly consent to the transfer of his personal data to:

16.4.1 any Group Company in the United States or any country or territory outside of the European Economic Area even where the country or territory in question does not maintain adequate data protection standards; and

16.4.2 to the Company's and any Group Company's business contacts in the United States or any country or territory outside of the European Economic Area in order to administrate their businesses and further their business interests even where the country or territory in question does not maintain adequate data protection standards.

17. NOTICES

Any notice to be given under this Agreement shall be in writing. Notices may be served by either party by personal service or by recorded delivery or by first-class post addressed to the other party or by leaving such notice at (in the case of the Company) its registered office for the time being and (in the case of the Executive) his last known home address and any notice given shall be deemed to have been served at the time at which the notice was personally served or if sent by recorded delivery at the time of delivery as recorded or if sent by first

class post on the second working day after posting or in the case of being left as appropriate at the registered office or last known home address, the date on which it was so left.

18. DEDUCTIONS

18.1 The Executive shall pay to the Company any sums owing by him to the Company upon demand by the Company at any time (whether during the Executive's employment by the Company or after the Termination Date).

18.2 The Executive shall indemnify the Company for itself and on behalf of any Group Company in relation to any income tax and Executive national insurance contributions not already deducted from the Executive's remuneration (or any taxes replacing the same) for which the Company or any Group Company has an obligation at any time to account (whether during the Executive's employment by the Company or after the Termination Date) in relation to the Executive.

18.3 For the purposes of the Employment Rights Act 1996 and otherwise, the Executive consents to the deduction from his wages or from any other sums owed to the Executive by the Company of any sums owing by him to the Company or any Group Company at any time, which shall for the purposes of this clause include any sums equal to any loss which has been or which the Company genuinely estimates will be incurred by the Company or any Group Company arising from a breach by the Executive of any of the terms of this Agreement.

18.4 This clause is without prejudice to the rights of the Company to recover any sums or balance of sums owing by the Executive to the Company by legal proceedings.

19. DISCLOSURES IN THE PUBLIC INTEREST

Nothing in this Agreement shall preclude the Executive from making a protected disclosure under the Act.

20. COLLECTIVE AGREEMENTS

There is no collective agreement which directly affects the Executive's employment.

21. DISCIPLINARY AND GRIEVANCE PROCEDURES

21.1 From time to time the Company may subject the Executive to disciplinary and grievance procedures. Any such procedures shall be available from his line manager and do not form part of his contract of employment.

21.2 The Company reserves the right to suspend the Executive with pay for such period as it considers reasonable in all the circumstances, so that it can investigate any allegations of misconduct against him.

22. GENERAL

22.1 The information in this Agreement constitutes a written statement of the terms of employment of the Executive in accordance with the provisions of the Employment Rights Act 1996.

22.2 This Agreement (including the Schedules to it), together with any documents required to be entered into pursuant to this Agreement, constitutes the entire and only legally binding agreement and understanding between the parties relating to the employment of the Executive by the Company and supersedes any previous agreements or arrangements or understandings (both oral and written) relating to the subject matter of this Agreement and any such document and all such agreements, arrangements or understandings shall be deemed to have been terminated with mutual consent with effect from the date hereof.

22.3 The Executive has not been induced to enter into this Agreement in reliance on, nor has he been given, any warranty, representation, statement, agreement or undertaking of any nature whatsoever other than as are expressly set out in this Agreement, provided that nothing in this clause shall limit or exclude the liability of the Company for fraud.

22.4 No variation to this Agreement shall be effective unless made by the parties and evidenced in writing and signed by or on behalf of the parties and expressed to be such a variation.

22.5 This contract is governed by English Law and is subject to the jurisdiction of the courts of England and Wales.

AS WITNESS the hands of the parties hereto or their duly authorised representatives.

Signed on behalf of **Replimune Limited** by

/s/ Philip Astley-Sparke	16 September 2015
Authorised Signatory	Date

SIGNED by **Colin Love**

/s/ Colin Love	16 September 2015
Colin Love	Date

SCHEDULE 1

POWER OF ATTORNEY

By this Power of Attorney made on 16 September 2015, I, Colin Love of 20 Woodhurst Road, Maidenhead, Berkshire, SL6 8TF in accordance with the terms of the service agreement between myself and Replimune Limited (the "**Company**") made on or around the date of this Power of Attorney (the "**Service Agreement**") appoint the Company to act as my attorney with my authority and on my behalf:

a) to sign, execute or do any and all instruments, agreements, deeds, other papers or things as may be necessary and desirable and generally to use my name for the purpose of giving to the Company or any Group Company or their nominees the full benefits of the provisions of clause 14 of the Service Agreement; and

b) to appoint any substitute attorney and to delegate to that substitute all or any powers conferred by this Power of Attorney.

Words and expressions defined in the Service Agreement shall have the same meanings herein.

I declare that this Power of Attorney, having been given by me to secure my obligations in connection with clause 14 of the Service Agreement, shall be irrevocable in accordance with section 4 of the Powers of Attorney Act 1971.

IN WITNESS whereof this Power of Attorney has been duly executed.

SIGNED as a **DEED** and	)
DELIVERED by	)
Colin Love	)
in the presence of:	)

/s/ Colin Love

Witness signature:	/s/ Alex Leuba
Witness name:	Alex Leuba
	5-10 St. Paul's Churchyard
	London EC4M 8AL
	Solicitor

SCHEDULE 2

Replimune Limited

The Magdalen Centre
Oxford Science Park
Robert Robinson Avenue
Oxford OX4 4GA

16 September 2015

Colin Love
20 Woodhurst Road
Maidenhead
Berkshire
SL6 8TF

Dear Colin

Agreement to opt out of maximum weekly working time

Under regulation 4(1) of the Working Time Regulations 1998 the average working time of a worker, including overtime, must not exceed 48 hours a week unless the worker has previously agreed otherwise in writing.

Please sign below to confirm your agreement that this limit on your working hours will not apply, and that your average working time may therefore exceed 48 hours a week.

You may terminate this agreement by giving three months' written notice at any time. Unless it is terminated in this way, this agreement shall remain in force until your employment with us ends.

Yours sincerely

/s/ Philip Astley-Sparke
For and on behalf of Replimune Limited

I agree that the statutory maximum average working time of 48 hours a week shall not apply to my employment with Replimune Limited and that my average working time may therefore exceed 48 hours a week.

Signed by /s/ Colin Love
Colin Love

Date 16 September 2015

EXHIBIT 10.12

REPLIMUNE GROUP, INC. REQUESTS THAT THE MARKED PORTIONS OF THIS EXHIBIT BE GRANTED CONFIDENTIAL TREATMENT UNDER RULE 24B-2 OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

Execution

CLINICAL TRIAL COLLABORATION AND SUPPLY AGREEMENT

This **CLINICAL TRIAL COLLABORATION AND SUPPLY AGREEMENT** (the "***Agreement***") is made and entered into effective as of the date signed by the last Party to sign below (the "***Effective Date***") by and between **Replimune Inc.**, a corporation organized under the laws of Delaware, having a place of business at 18 Commerce Way, Woburn, MA 01801 (the "***Recipient***") and **Bristol-Myers Squibb Company**, having a place of business at 345 Park Avenue, New York, NY 10154 ("***BMS***"). The Recipient and BMS are sometimes individually referred to in this Agreement as a "***Party***" and collectively as the "***Parties***."

PRELIMINARY STATEMENTS

A. The Recipient desires to conduct, and BMS desires to supply the BMS Study Drug (as defined below) for the conduct of, a Combined Therapy Clinical Trial (as defined below) in accordance with the Protocol (as defined below) therefor and in accordance with the terms of this Agreement.

B. The Parties desire to agree on various terms and conditions to govern the Parties' obligations in connection with the performance of the Combined Therapy Clinical Trial.

NOW, THEREFORE, in consideration of the foregoing premises and the mutual promises and covenants contained herein, the Parties agree as follows:

ARTICLE 1

DEFINITIONS

The terms in this Agreement with initial letters capitalized, whether used in the singular or the plural, shall have the meaning set forth below or, if not listed below, the meaning designated in places throughout this Agreement.

"***Adverse Event***," ("AE") "***Serious Adverse Event***" ("SAE") and "***Serious Adverse Drug Reaction***" ("SADR") shall have the meanings provided to such terms in the International Conference on Harmonization ("ICH") guideline for industry on Clinical Safety Data Management (E2A, Definitions and Standards for Expedited Reporting).

"***Affiliates***" means, with respect to a particular Party, an entity that, directly or indirectly, through one or more intermediaries, controls, is controlled by or is under common control with such Party, only for so long as such control exists. As used in this definition, the term "controls" (with correlative meanings for the terms "controlled by" or "under common control with") means (a) that an entity or company owns, directly or indirectly, more than fifty percent (50%) of the voting stock of another entity, or (b) that an entity, person or group otherwise has the actual ability to control and direct the management of the entity, whether by contract or otherwise.

"***Agreement***" shall have the meaning set forth in the preamble to this Agreement, and includes the Appendices attached hereto, the Supply and Quality Documentation and any and all amendments of any of the foregoing hereafter signed by the Parties with reference to this Agreement and made part hereof.

"***Applicable Law***" means all applicable laws, rules and regulations (whether federal, state or local) that may be in effect from time to time, including current Good Clinical Practices (GCP), Good Laboratory Practices (GLP) and Good Manufacturing Practices (GMP).

"***Arbitration Matter***" means any disputed matter that relates to or arises out of the validity, interpretation or construction of, or the compliance with or breach of, this Agreement; *provided that* such disputed matter has been considered, but not resolved, by the Executive Officers as set forth in Section 13.3. For clarity, no Publication Dispute, or any matter requiring mutual agreement of both Parties shall be an Arbitration Matter.

"***BMS Class Drug***" means (i) the BMS Study Drug and (ii) any other antibodies that are designed to selectively bind to PD-1 or PD-L1.

"***BMS Indemnitees***" shall have the meaning set forth in Section 11.2.

"***BMS Independent Patent Rights***" means any Patent Rights Controlled by BMS (or its Affiliates) (a) as of the Effective Date or (b) during the Term the subject matter of which was conceived or first reduced to practice through activities other than those performed pursuant to this Agreement, in each case of (a) or (b) that Cover the use (whether alone or in combination with other agents), manufacture, formulation or composition of matter of the BMS Study Drug.

"***BMS Regulatory Documentation***" means any Regulatory Documentation pertaining to the BMS Study Drug that exists as of the Effective Date or that is created during the Term through efforts outside this Agreement.

"***BMS Study Data***" shall have the meaning set forth in Section 8.2.

"***BMS Study Drug***" means BMS's proprietary anti-PD-1 monoclonal antibody product known as Opdivo® (nivolumab).

"***BMS Study Invention***" means any Invention that pertains to (a) the composition of matter of any BMS Class Drug (and not any Recipient Class Drug), (b) method of manufacture or formulation of any BMS Class Drug (and not any Recipient Class Drug) as a Single Agent Compound, and/or (c) a method of use of any BMS Class Drug (and not any Recipient Class Drug) as a monotherapy or as used with other agents, antibodies or compounds (other than an Invention pertaining, whether generically or specifically, to the composition of matter, method of manufacture or formulation, or a method of use of both a BMS Class Drug and a Recipient Class Drug).

"***BMS Study Patent Rights***" means any Patent Rights that Cover any BMS Study Invention (and not a Recipient Study Invention or Combined Therapy Invention), excluding BMS Independent Patent Rights and BMS Technology. For avoidance of doubt, any Patent Rights that cover both (a) a BMS Study Invention and (b) any other type of Invention is included within the Combined Therapy Patent Rights.

"***BMS Technology***" means all Technology Controlled by BMS (or its Affiliates) as of the Effective Date or during the Term created through efforts outside of this Agreement related to the BMS Study Drug or the Combined Therapy and necessary for the conduct of the Combined Therapy Clinical Trial. For clarity, BMS Technology does not include (a) Inventions, (b) Study Data, or (c) Combined Therapy Clinical Trial Regulatory Documentation.

"***Breaching Party***" shall have the meaning set forth in Section 12.2(a).

"***Business Day***" means a day other than Saturday, Sunday or any day on which commercial banks located in New York, NY are authorized or obligated by Applicable Law to close.

"***CDA***" shall have the meaning set forth in Section 9.1(a).

"***Clinical Hold***" means that (a) the FDA has issued an order to a Party pursuant to 21 CFR §312.42 to delay a proposed clinical investigation or to suspend an ongoing clinical investigation of the Combined Therapy or such Party's Single Agent Compound in the United States or (b) a Regulatory Authority other than the FDA has issued an equivalent order to that set forth in (a) in any other country or group of countries.

"***Combined Therapy***" means a therapy using the Recipient Study Drug and the BMS Study Drug in combination, with or without another agent.

"***Combined Therapy Clinical Trial***" means the human clinical trial using the Recipient Study Drug and the BMS Study Drug, which will be conducted under the Recipient's protocol (said, protocol, as it may be amended from time to time in accordance with this Agreement, the "***Protocol***") and is incorporated herein by reference. A draft Protocol summary as of the Effective Date is attached as Appendix A hereto. The draft Protocol shall be jointly agreed by the Parties as set forth in Section 2.1(a).

"***Combined Therapy IND***" shall have the meaning set forth in Section 2.1(b).

"***Combined Therapy Invention***" means an Invention that is not a Recipient Study Invention or a BMS Study Invention.

"***Combined Therapy Patent Right(s)***" means any Patent Rights that Cover any Combined Therapy Invention or Combined Therapy Study Data. For clarity, "Combined Therapy Patent Right(s)" do not include any BMS Independent Patent Rights and Recipient Independent Patent Rights.

"***Combined Therapy Clinical Trial Regulatory Documentation***" means any Regulatory Documentation to be submitted for the conduct of the Combined Therapy Clinical Trial, but excluding (a) any Recipient Regulatory Documentation and (b) any BMS Regulatory Documentation.

"***Combined Therapy Study Data***" shall have the meaning set forth in Section 8.2.

"***Commercially Reasonable Efforts***" means, with respect to a Party, the level of effort and resources normally devoted by such Party to conduct a clinical trial for a biopharmaceutical product or compound that is owned by it or to which it has rights, which is of similar market potential, profit potential or strategic value and at a similar stage in its development or product life based on conditions then prevailing.

"***Confidential Information***" shall have the meaning set forth in Section 9.1(a).

"***Control***" or "***Controlled***" means, with respect to particular information or intellectual property, that the applicable Party owns or has a license to such information or intellectual property and has the ability to grant a right, license or sublicense to the other Party as provided for herein without violating the terms of any agreement or other arrangement with any Third Party.

"***Cover***" means, with respect to a Patent Right, that, but for rights granted to a Person under such Patent Right, the practice by such Person of an invention described in such Patent Right would infringe a claim included in such Patent Right, or in the case of a Patent Right that is a patent application, would infringe a claim in such patent application if it were to issue as a patent. "***Covered***" or "***Covering***" shall have correlative meanings.

"***CRO***" means any Third Party contract research organization used to conduct the Combined Therapy Clinical Trial, including laboratories and Third Parties used to maintain the safety database from the Combined Therapy Clinical Trial, but, for clarity, excluding clinical trial sites and any Third Parties who are individuals.

"***Cure Period***" shall have the meaning set forth in Section 12.2(a).

[ ]*

[ ]*

"***Date of First Receipt***" means, with respect to a Party, the date on which any employee of such Party, its Affiliates or its Third Party subcontractors first becomes aware of safety-related information.

"***Designated Clinical Contact***" shall have the meaning set forth in Section 2.3.

"***Designated Supply Contact***" shall have the meaning set forth in Section 4.7.

"***Dispute***" shall have the meaning set forth in Section 13.3(b).

"***Effective Date***" shall have the meaning set forth in the preamble to this Agreement.

"***Executive Officers***" means the Chief Executive Officer of the Recipient and the Head of Oncology Development of BMS (or their respective designees).

"***FDA***" means the United States Food and Drug Administration, or any successor agency having the same or similar authority.

"***Filing Party***" shall have the meaning set forth in Section 6.1(c).

"***Global Safety Database***" means the database containing Adverse Events, Serious Adverse Events, Serious Adverse Drug Reactions and pregnancy reports for the Combined Therapy, and shall be the authoritative data source for regulatory reporting and responding to regulatory queries with respect to the Combined Therapy Clinical Trial.

"***Good Clinical Practices***" or "***GCP***" means, as to the United States and the European Union, applicable good clinical practices as in effect in the United States and the European Union, respectively, during the Term and, with respect to any other jurisdiction, clinical practices equivalent to good clinical practices as then in effect in the United States or the European Union.

"***Good Laboratory Practices***" or "***GLP***" means, as to the United States and the European Union, applicable good laboratory practices as in effect in the United States and the European Union, respectively, during the Term and, with respect to any other jurisdiction, laboratory practices equivalent to good laboratory practices as then in effect in the United States or the European Union.

"***Good Manufacturing Practices***" or "***GMP***" means, as to the United States and the European Union, applicable good manufacturing practices as in effect in the United States and the European Union, respectively, during the Term and, with respect to any other jurisdiction, manufacturing practices equivalent to good manufacturing practices as then in effect in the United States or the European Union.

"***ICF***" shall have the meaning set forth in Section 5.1(f).

"***IND***" means (a) an Investigational New Drug Application as defined in the United States Food, Drug and Cosmetic Act, as amended, and regulations promulgated thereunder, or any successor application or procedure required to initiate clinical testing of a drug in humans in the United States, (b) a counterpart of such an Investigational New Drug Application that is required in any other country before beginning clinical testing of a drug in humans in such country, including, for clarity, a "***Clinical Trial Application***" in the European Union, and (c) all supplements and amendments to any of the foregoing.

"***Indemnify***" shall have the meaning set forth in Section 11.1.

"***Infringe***" and "***Infringement***" means any alleged or threatened (in writing) infringement, or misappropriation by a Third Party, of any Patent Rights.

"***Invention***" means any invention or Technology, whether or not patentable, that is made, conceived, or first actually reduced to practice after the Effective Date by, for or on behalf of a Party, or by, for or on behalf of the Parties together (including by a Third Party in the performance of the Combined Therapy Clinical Trial), (a) in relation to the Combined Therapy Clinical Trial to be conducted under this Agreement or (b) by or resulting from the use of Study Data, but excluding in each case any Study Data itself.

"***IRB***" means an Investigational Review Board or Ethics Committee (or similar body in a given country).

"***Licensee***" shall have the meaning set forth in Section 13.10(b).

"***Losses***" shall have the meaning set forth in Section 11.1.

"***Manufacture"*** or "***Manufacturing***" means manufacturing, processing, formulating, packaging, labeling, holding (including storage), and quality control testing of a Single Agent Compound or the Combined Therapy, in each case so as to be suitable for use in the Combined Therapy Clinical Trial under Applicable Law.

"***Material Safety Issue***" means a Party's good faith belief that there is an unacceptable risk for harm in humans based upon: (a) pre-clinical safety data, including data from animal toxicology studies, or (b) the observation of Serious Adverse Events in humans after the Recipient Study Drug or the BMS Study Drug, either as a Single Agent Compound or in combination with another pharmaceutical agent (including as the Combined Therapy), has been administered to or taken by humans, such as during the Combined Therapy Clinical Trial.

"***NDA***" means (a) any new drug application or biologics license application filed with the FDA, or any successor application or procedure required to introduce a drug or biologic into commerce in the United States, (b) a counterpart of such a new drug application or biologics license application that is required in any other country before beginning the commercialization of a drug or a biologic in humans in such country, and (c) all supplements and amendments to any of the foregoing.

"***Non-Breaching Party***" shall have the meaning set forth in Section 12.2(a).

"***Officials***" shall have the meaning set forth in Section 10.9.

"***Ono***" means Ono Pharmaceutical Co., Ltd.

"***Ono-BMS Agreements***" means those certain Collaboration Agreements between BMS and Ono dated as of September 20, 2011 and as of July 23, 2014, as amended from time to time, and agreements between Ono and BMS and their Affiliates relating thereto that may be in effect from time to time.

"***Ono Territory***" means Japan, South Korea and Taiwan.

"***Operational Matters***" shall have the meaning set forth in Section 5.1.

"***Party***" or "***Parties***" shall have the meaning set forth in the preamble to this Agreement.

"***Patent Rights***" means any (a) United States or foreign patents, (b) United States or foreign patent applications, including all provisional applications, substitutions, continuations, continuations-in-part, divisions, renewals, and all patents granted thereon, (c) United States or foreign patents-of-addition, reissues, reexaminations (including *ex parte* reexaminations, *inter partes* reviews, *inter partes* reexaminations, post grant reviews and supplemental examinations) and extensions or restorations by existing or future extension or restoration mechanisms, including supplementary protection certificates,

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patent term extensions, or the equivalents thereof, and (d) any other form of government-issued right substantially similar to any of the foregoing.

"***Payment***" shall have the meaning set forth in Section 10.9.

"***Person***" means any individual, sole proprietorship, partnership, limited partnership, limited liability partnership, corporation, limited liability company, business trust, joint stock company, trust, unincorporated association, joint venture or other similar entity or organization, including a government or political subdivision, department or agency of a government.

"***Personal Data***" means any information relating to an identified or identifiable natural person.

"***POTV***" shall have the meaning set forth in Section 9.6(a).

"***Protocol***" shall have the meaning set forth in the definition of Combined Therapy Clinical Trial.

"***Publication Dispute***" shall have the meaning set forth in Section 9.5(b).

"***Quarter***" means a calendar quarter.

"***Recipient Class Drug***" means the Recipient Study Drug and any oncolytic virus derived from a potent herpes simplex virus strain expressing gibbon ape leukemia virus glycoprotein and eliciting anti-tumor activity.

"***Recipient Indemnitees***" shall have the meaning set forth in Section 11.1.

"***Recipient Independent Patent Rights***" means any Patent Rights Controlled by the Recipient or a Recipient Affiliate (a) as of the Effective Date or (b) during the Term the subject matter of which was conceived or first reduced to practice through activities other than those performed pursuant to this Agreement, in each case (a) and (b) that Cover the use (either alone or in combination with other agents), manufacture, formulation or composition of matter of the Recipient Study Drug.

"***Recipient Regulatory Documentation***" means any Regulatory Documentation pertaining to the Recipient Study Drug that exists as of the Effective Date or that is created during the Term through efforts outside this Agreement.

"***Recipient Study Data***" shall have the meaning set forth in Section 8.2.

"***Recipient Study Drug***" means the Recipient's proprietary oncolytic virus known as RP-1.

"***Recipient Study Invention***" means any Invention that pertains to (a) the composition of matter of any Recipient Class Drug (and not any BMS Class Drug), (b) method of manufacture or formulation of any Recipient Class Drug (and not any BMS Class Drug) as a Single Agent Compound, or (c) a method of use of the Recipient Class Drug (and not any BMS Class Drug) as a monotherapy or as used in combination with other agents, antibodies or compounds (other than Invention pertaining, whether generically or specifically, to the composition of matter, method of manufacture, formulation or a method of use of both a BMS Class Drug and a Recipient Class Drug.

"***Recipient Study Patent Rights***" means any Patent Rights that Cover any Recipient Study Invention (and not a BMS Study Invention or a Combined Therapy Invention), excluding Recipient Independent Patent Rights and Recipient Technology. For avoidance of doubt, any Patent Rights that cover both (a) a Recipient Study Invention and (b) any other type of Invention is included within the Combined Therapy Patent Rights.

"***Recipient Technology***" means all Technology Controlled by the Recipient or a Recipient Affiliate as of the Effective Date or during the Term which is created through efforts outside of this Agreement related to the Recipient Study Drug or the Combined Therapy and necessary for the conduct of the Combined Therapy Clinical Trial. For clarity, Recipient Technology does not include (a) Inventions, (b) Study Data, or (c) Combined Therapy Clinical Trial Regulatory Documentation.

"***Regulatory Authority***" means the FDA or any other governmental authority outside the United States (whether supranational, national, federal, provincial and/or local) that is the counterpart to the FDA, including the European Medicines Agency for the European Union.

"***Regulatory Documentation***" means, with respect to a Party's Single Agent Compound, all submissions to Regulatory Authorities in connection with the development of such Single Agent Compound, as applicable, including all INDs and amendments thereto, NDAs and amendments thereto, drug master files, correspondence with regulatory agencies, periodic safety update reports, adverse event files, complaint files, inspection reports and manufacturing records, in each case together with all supporting documents (including documents that include clinical data).

"***Results***" shall have the meaning set forth in Section 9.5(b).

"***Right of Cross-Reference***" means, with regard to a Party, allowing the applicable Regulatory Authority in a country to have access to relevant information (by cross-reference, incorporation by reference or otherwise) contained in Regulatory Documentation (and any data contained therein) filed with such Regulatory Authority with respect to a Party's Single Agent Compound (and, in the case of BMS, the Right to Cross-Reference the Combined Therapy IND), only to the extent necessary for the conduct of the Combined Therapy Clinical Trial in such country or as otherwise expressly permitted or required under this Agreement to enable a Party to exercise its rights or perform its obligations hereunder, and, except as to information contained in the Combined Therapy IND pertaining to the Combined Therapy, without the disclosure of such information to such Party.

"***Safety Issue***" means any information suggesting an emerging safety concern or possible change in the risk-benefit balance for a drug, including information on a possible causal relationship between an Adverse Event and a drug, the relationship being unknown or incompletely documented previously.

"***Safety Signal***" means information arising from one or multiple sources, including observations and experiments, which suggests a new potentially causal association, or a new aspect of a known association between an intervention and an event or set of related events, either adverse or beneficial, that is judged to be of sufficient likelihood to justify verificatory action.

"***Samples***" means biological specimens collected from Combined Therapy Clinical Trial study subjects (including fresh and/or archived tumor samples, serum, peripheral blood mononuclear cells, plasma, and whole blood for RNA and DNA sample isolation).

"***Shortage***" shall have meaning set forth in Section 4.5.

"***Single Agent Compound***" or "***Compound***" means, with respect to (a) the Recipient, the Recipient Study Drug, as monotherapy, and (b) BMS, the BMS Study Drug, as monotherapy.

"***Sponsor***" means an applicant or holder of clinical studies applications/notifications.

"***Study Data***" shall have the meaning set forth in Section 8.1.

"***Sunshine Laws***" shall have the meaning set forth in Section 9.6(c).

"***Supply and Quality Documentation***" shall have the meaning set forth in Section 4.3.

CONFIDENTIAL

*CONFIDENTIAL TREATMENT REQUESTED.

"***Technology***" means information, inventions, discoveries, trade secrets, knowledge, technology, methods, processes, practices, formulae, instructions, skills, techniques, procedures, experiences, ideas, technical assistance, designs, drawings, assembly procedures, computer programs, specifications, data and results not generally known to the public (including biological, chemical, pharmacological, toxicological, pharmaceutical, physical and analytical, pre-clinical, clinical, safety, manufacturing and quality control data and know-how, including study designs and protocols), in all cases, whether or not patentable, in written, electronic or any other form now known or hereafter developed and materials, including Regulatory Documentation.

"***Term***" shall have the meaning set forth in Section 12.1.

"***Territory***" means the United States, including Puerto Rico, and the European Union (including the United Kingdom, whether or not an EU member state). For clarity, the Territory excludes the Ono Territory.

"***Third Party***" means any Person or entity other than the Recipient and BMS and their respective Affiliates.

"***Third Party Claim***" shall have the meaning set forth in Section 11.1.

"***Third Party License Payments***" means any payments (e.g., upfront payments, milestones, royalties) due to any Third Party under license agreements or other written agreements granting rights to intellectual property owned or controlled by such Third Party to the extent that such rights are

necessary for (a) the making, using or importing of a Party's Single Agent Compound for the conduct of the Combined Therapy Clinical Trial, or (b) the conduct of the Combined Therapy Clinical Trial.

"***TP Study Costs***" shall have the meaning set forth in Section 7.2.

ARTICLE 2

SCOPE

2.1 Scope.

(a) The Recipient will conduct the Combined Therapy Clinical Trial in accordance with the Protocol and the terms of this Agreement. The Parties will use good faith efforts to jointly agree on a draft Protocol within [ ]* following the Effective Date, which shall be based on the draft Protocol summary attached as Appendix A hereto. The Recipient shall be solely responsible for the content of the Protocol following agreement by the Parties on the draft Protocol; *provided that*: (i) the Recipient will notify BMS of any proposed amendments to the draft Protocol agreed by the Parties (or to the final Protocol initially approved by an IRB) and the Recipient will consider any comments provided by BMS regarding the proposed amendments (it being understood that the Parties will endeavor to set forth in writing the circumstances (e.g., administrative matters) where it may be feasible for the Recipient to make specific Protocol amendments without the need for BMS to comment), and (ii) any changes to the draft Protocol agreed by the Parties (or to the final Protocol initially approved by an IRB) that pertain to the administration of the BMS Study Drug must be reviewed and expressly approved by BMS in writing or the change may not be implemented. BMS shall have [ ]* from the date on which the Recipient provides the applicable Protocol amendment to BMS to approve or provide any comments to the Recipient concerning the proposed amendment. For clarity, Recipient shall not conduct any patient recruitment activities for, or otherwise initiate, the Combined Therapy Clinical Trial until the draft Protocol is jointly agreed by the Parties.

(b) The Combined Therapy Clinical Trial shall be conducted under a combination IND, for which the Recipient will be the sponsor of record (the "***Combined Therapy IND***") and shall be

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conducted only in the Territory. The Recipient shall be the sole holder of all legal interests in the Combined Therapy IND; *provided, however, that* the Recipient may not grant any Third Party any Right of Cross-Reference with respect to any portion of the Combined Therapy IND pertaining to BMS's Single Agent Compound for use as monotherapy or for use in combination with any molecules, agents, antibodies or compounds other than the Recipient Study Drug.

(c) BMS will make available its current package insert for the BMS Study Drug in the Territory available to the Recipient and will provide any updates thereto at the same time as the same are made publicly available.

(d) If the Recipient and BMS agree that the Recipient will require access to the investigator's brochure for the BMS Study Drug in order for the site to conduct the Combined Therapy Clinical Trial, then (i) BMS will provide the current version of its investigator brochure to the Recipient promptly and (ii) will thereafter, until the conclusion of the Combined Therapy Clinical Trial, provide to the Recipient, upon reasonable request, the latest investigator's brochure for the BMS Study Drug or any amendments thereto in accordance with BMS's customary practices for same. The Recipient shall, and shall require that any clinical trial sites for the Combined Therapy Clinical Trial shall, use any such data provided pursuant to this Section 2.1(d) solely (A) to evaluate the safety and efficacy of the BMS Study Drug and the Combined Therapy for use in Combined Therapy Clinical Trial, (B) to meet any regulatory requirements pertaining to the conduct of the Combined Therapy Clinical Trial and (C) to enable the Recipient to draft and update as necessary the investigator's brochure for the Combined Therapy Clinical Trial. The Recipient will ensure that clinical trial sites for the Combined Therapy Clinical Trial are obligated to protect such information and disclosures as set forth in Article 9. The Recipient's right to use the investigator's brochure provided by BMS shall terminate upon the completion or termination of the Combined Therapy Clinical Trial and shall not be used for purposes of conducting any other clinical studies.

(e) If requested in writing by the Recipient and agreed to by BMS (such consent not to be unreasonably withheld), BMS shall provide a Right of Cross-Reference as needed to its existing Regulatory Documentation for BMS's Single Agent Compound for those countries in the Territory where the Combined Therapy Clinical Trial will be conducted solely as necessary to allow the Combined Therapy Clinical Trial to be conducted under the Combined Therapy IND in an applicable country; *provided that* such Right of Cross-Reference shall terminate upon the expiration or termination of this Agreement and shall not be used for purposes of conducting any other clinical studies, except that, in the case of termination for a Material Safety Issue pursuant to Section 12.4, such Right of Cross-Reference shall remain in effect solely (i) to the extent necessary to permit the Recipient to comply with any outstanding obligations required by a Regulatory Authority and/or Applicable Law or (ii) as necessary to permit the Recipient to continue to dose subjects enrolled in the Combined Therapy Clinical Trial through completion of the Protocol if required by the applicable Regulatory Authority(ies) and/or Applicable Laws.

(f) If PDL-1 biomarker testing is incorporated into the Protocol, the Recipient agrees to use the commercially available [ ]* to perform such testing.

(g) The Recipient shall refer to the applicable BMS Study identification number in all Combined Therapy Clinical Trial reports, reports of Serious Adverse Events, BMS Study Drug requests, and all other material submissions or communications to BMS relating to the Protocol.

2.2 Adverse Event Reporting.

(a) This Section 2.2 shall govern safety reporting arising from the Combined Therapy Clinical Trial. The Recipient will manage all drug safety reporting activities for the Combined Therapy Clinical Trial.

(b) The Recipient will forward to BMS at the contact information below via fax or secure e-mail in a format to be agreed to by the Parties all fatal or life threatening SAE reports within four (4) calendar days of Date of First Receipt, all other SAE reports, reports of exposure during pregnancy (maternal and paternal) and reports of suspected transmission of an infectious agent via the BMS Study Drug or Combined Therapy within nine (9) calendars days of Date of First Receipt, in each case for the BMS Study Drug and the Combined Therapy administered in the Combined Therapy Clinical Trial.

BMS – Adverse Event Reporting Contact	
E-mail	[ ]*
Fax	[ ]*
Acknowledgment of ICSR receipt:	[ ]*

(c) Each Party shall collect, use and disclose Personal Data obtained in the course of performing the pharmacovigilance activities under this Section 2.2 solely for the purposes of complying with the regulatory obligations as described in this Agreement, or as otherwise required by Applicable Law or by a court order. Both Parties will use electronic, physical, and other safeguards appropriate to the nature of the information to prevent any use or disclosure of Personal Data other than as provided for by this Agreement and permitted under the ICF. Both Parties will also take reasonable precautions to protect such Personal Data from accidental, unauthorized, or unlawful alteration or destruction. Each Party will notify the other Party promptly of any accidental, unauthorized, or unlawful destruction, loss, alteration, or disclosure of, or access of such Personal Data.

(d) The Recipient will promptly make available to BMS upon request such records that the Recipient Controls as is necessary or useful to perform medical assessment of any Adverse Event associated with the use of the BMS Study Drug or Combined Therapy reported during the Combined Therapy Clinical Trial that is forwarded to BMS under this Agreement. The Recipient will designate a single point of contact within its organization (and will provide to BMS the email address of such point of contact prior to the start of the Combined Therapy Clinical Trial) for any pharmacovigilance-related follow-up questions that BMS would have.

(e) The Recipient shall perform case level reconciliation to confirm that BMS has received all reports required under this Agreement. The Recipient shall e-mail [ ]* to request a reconciliation report for the Combined Therapy Clinical Trial. The Recipient shall reconcile the cases identified as being transmitted to BMS on BMS's reconciliation report and those contained in the Combined Therapy Clinical Trial database. The Recipient shall send missing case-level events to BMS Global Pharmacovigilance at [ ]* or by fax at [ ]*. The Recipient shall perform such reconciliation every [ ]*, unless otherwise agreed by BMS in writing.

(f) As Sponsor, the Recipient will be responsible for submitting all applicable Individual Case Safety Report (ICSRs) and aggregate report submissions to Regulatory Authorities for the Combined Therapy Clinical Trial. The Recipient will provide BMS with the final version of any aggregate report at the time of submission. The Recipient will also submit appropriate safety letters or safety reports to study investigators, the reviewing IRB and authorized Regulatory Authorities in accordance with Applicable Law.

(g) In the event that BMS produces any Development Safety Update Report ("***DSUR***") in respect to the BMS Study Drug, BMS will provide to the Recipient upon request, and for the duration of the Combined Therapy Clinical Trial, copies of the executive summary and any line listings of Serious Adverse Drug Reactions extracted from the final DSUR for information purposes only and to assist the Recipient in generation of their own clinical trial aggregate report, where applicable. The Recipient agrees not to forward such BMS DSUR sections to any Third Party, except to its Affiliates, consultants, advisors and contractors under obligations of confidentiality for generation of such a clinical trial aggregate

report or as otherwise permitted with respect to BMS Confidential Information under Section 9.3(b), (d), (e), and (f).

(h) If the Recipient determines there is a significant Safety Issue or significant Safety Signals arising in a clinical trial that may be associated with the BMS Study Drug or Combined Therapy, the Recipient will disclose such information to BMS promptly after such determination.

(i) BMS will ensure that any urgent Safety Issues or Safety Signals relating to the BMS Study Drug will be communicated to the Recipient promptly after such determination.

2.3 Clinical Study Designated Contact. Each Party will designate an employee within its organization (the "***Designated Clinical Contact***") who will coordinate and/or facilitate:

(a) the review of Protocol amendments submitted by the Recipient for BMS approval and with whom comments thereon may be discussed;

(b) any BMS clinical and regulatory responsibilities and communications regarding the Combined Therapy Clinical Trial;

(c) internal BMS review of any document or regulatory communication and the provision of any BMS comments; and

(d) discussion of any other topics or issues relating to the Combined Therapy Clinical Trial requested by the Recipient or BMS.

2.4 Conduct. Each Party shall use Commercially Reasonable Efforts to (a) perform and fulfill its respective activities under the Combined Therapy Clinical Trial and this Agreement on a timely basis and in an effective manner consistent with prevailing standards, (b) supply the quantities of its Compound in accordance with Article 4 as needed to conduct the Combined Therapy Clinical Trial on a timely basis, and, in the case of the Recipient, package and deliver same to study sites on a timely basis, and (c) in the case of the Recipient, conduct and complete the Combined Therapy Clinical Trial on a timely basis in accordance with the Protocol and Third Party agreements relating thereto, and provide sufficient resources, funding and personnel to conduct

and perform the Combined Therapy Clinical Trial on a timely basis in accordance with the Protocol for same and the terms of this Agreement. Each Party shall perform its duties for the Combined Therapy Clinical Trial in accordance with Applicable Law, including GCP, GLP and GMP as applicable.

ARTICLE 3

LICENSE GRANTS

3.1 Grant by BMS. Subject to the terms of this Agreement, BMS hereby grants, and shall cause its Affiliates to grant, to the Recipient a non-exclusive, non-transferable, royalty-free license (with the right to sublicense solely pursuant to the terms of and subject to the limitations of Section 3.2) under the BMS Independent Patent Rights and BMS Technology to use the BMS Study Drug solely within the Territory and solely to the extent necessary to discharge the Recipient's obligations under this Agreement with respect to the conduct of the Combined Therapy Clinical Trial in the Territory.

3.2 Sublicensing.

(a) The Recipient shall have the right to grant sublicenses under the licenses granted to it under Section 3.1, to Affiliates and to Third Parties, if required for an Affiliate or a Third Party to perform its duties with respect to the conduct of the Combined Therapy Clinical Trial, solely as necessary

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to assist the Recipient in carrying out its responsibilities with respect to the Combined Therapy Clinical Trial.

(b) With regard to any such sublicenses permitted and made under this Agreement, (i) the sublicensees, except Affiliates (so long as they remain Affiliates of a Party), shall be subject to written agreements that bind such sublicensees to obligations that are consistent with a Party's obligations under this Agreement including confidentiality and non-use provisions no less restrictive than those set forth in herein, and provisions regarding intellectual property that ensure that the Parties will have the rights provided under this Agreement to any intellectual property relating to their Single Agent Compound and/or the Combined Therapy created by such sublicensee, (ii) each Party shall provide written notice to the other Party of any such sublicense (and obtain approval for sublicenses to Third Parties other than clinical trial sites); and (c) the licensing Party shall remain liable to the other Party for all actions of the sublicensing Party's sublicensees.

3.3 No Implied Licenses. Unless and except as specifically set forth in this Agreement, neither Party shall acquire any license or other intellectual property interest, by implication or otherwise, in any intellectual property of the other Party, including Confidential Information disclosed to it under this Agreement or under any Patent Rights Controlled by the other Party or its Affiliates.

ARTICLE 4

MANUFACTURE AND SUPPLY

4.1 Recipient Study Drug Manufacture and Supply.

(a) The Recipient shall be responsible, at its sole costs and expense, for manufacturing, packaging and labeling (or having manufactured, packaged or labeled) GMP-grade quantities of the Recipient Study Drug, as well as obtaining any other drug (other than the BMS Study Drug provided by BMS pursuant to Section 4.2) required for the conduct of the Combined Therapy Clinical Trial, and shall package and label if and as required by the Protocol and/or applicable Regulatory Authorities all drugs (including the BMS Study Drug) used in the Combined Therapy Clinical Trial, on a timely basis and in accordance with applicable specifications as required for the conduct of the Combined Therapy Clinical Trial. The Recipient Study Drug shall be manufactured in accordance with Applicable Law (including GMP) and shall be of similar quality to the Recipient Study Drug used by the Recipient for its other clinical trials of the Recipient Study Drug.

(b) The Recipient shall provide BMS with prompt notice of any Manufacturing and supply issues with respect to the Recipient Study Drug, or any defects or manufacturing problems identified with respect to the BMS Study Drug supplied to Recipient, that may adversely impact the conduct or timelines of the Combined Therapy Clinical Trial.

4.2 BMS Study Drug.

(a) Manufacture and Supply. BMS shall Manufacture or have Manufactured the BMS Study Drug in reasonable quantities needed, and at the points in time as agreed to by the Parties, for the Combined Therapy Clinical Trial, and shall supply such BMS Study Drug as either commercially labeled or unlabeled vials to the Recipient or its designee for use solely in the Combined Therapy Clinical Trial. The Recipient will at its sole expense, package and label the BMS Study Drug for use in the Combined Therapy Clinical Trial to the extent necessary. The cost of Manufacture and supply (including shipping, taxes and duty, if applicable) of the BMS Study Drug for the Combined Therapy Clinical Trial shall be borne solely by BMS, and BMS shall bear the risk of loss for such quantities of BMS Study Drug until delivery of such quantities of BMS Study Drug to the Recipient or its designee. BMS shall also be responsible for the payment of any Third Party License Payments that may be due based on the manufacture,

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supply and use of the BMS Study Drug used in the Combined Therapy Clinical Trial. The BMS Study Drug shall be manufactured in accordance with Applicable Law (including GMP) and shall be of similar quality to the BMS Study Drug used by BMS for its other clinical trials of the BMS Study Drug. BMS shall deliver certificates of analysis, and any other documents specified in the Supply and Quality Documentation, including such documentation as is necessary to allow the Recipient to compare the BMS Study Drug certificate of analysis to the BMS Study Drug specifications. Pursuant to the Supply and

Quality Documentation, BMS shall be responsible for the regulatory compliance of the quality of the BMS Study Drug at the time the BMS Study Drug is delivered to the Recipient with the regulatory filings in the countries in the Territory where the Combined Therapy Clinical Trial will be performed. Subject to Section 4.4, the Parties shall cooperate in accordance with Applicable Law to minimize indirect taxes (such as value added tax, sales tax, consumption tax and other similar taxes) relating to the BMS Study Drug in connection with this Agreement.

(b) Use of BMS Study Drug Supplied by BMS to the Recipient. The Recipient shall use the quantities of BMS Study Drug supplied to it under this Agreement solely as necessary for, and in accordance with, this Agreement and the Protocol, and for no other purpose, including as a reagent or tool to facilitate its internal research efforts, for any commercial purpose, or for other clinical or non-clinical research unrelated to the Combined Therapy Clinical Trial. Except as may be required or expressly permitted by the Protocol or the Supply and Quality Documentation, the Recipient shall not perform, and shall not allow any Third Party to perform, any analytical testing of the quantities of BMS Study Drug supplied to it under this Agreement. If Study Drug supplied by BMS is lost, damaged, destroyed or becomes unable to comply with applicable specifications while under the control of the Recipient or any of its (sub)contractors, including common carriers and clinical study sites contracted by the Recipient, BMS shall not be obligated to replace same, and if BMS does elect to do so, BMS may elect to charge the Recipient a reasonable replacement cost to replace same.

4.3 Supply and Quality Documentation. BMS shall supply the BMS Study Drug to the Recipient in accordance with such supply and quality addenda or agreement(s) as the Parties may agree (the "***Supply and Quality Documentation***"). The Parties shall finalize and execute the Supply and Quality Documentation within [ ]* of the Effective Date, but in no event later than the date on which the first shipment of the BMS Study Drug is supplied for use in the Combined Therapy Clinical Trial. The Supply and Quality Documentation shall outline the additional roles and responsibilities relative to the quality of BMS Study Drug in support of the Combined Therapy Clinical Trial. It shall include the responsibility for quality elements as well as exchanged GMP documents and certifications required to release the BMS Study Drug for the Combined Therapy Clinical Trial. In addition, the Supply and Quality Documentation shall detail the documentation required for each shipment of BMS Study Drug supplied to the Recipient or its designee for use in the Combined Therapy Clinical Trial.

4.4 Supply Forecast. Estimated supply and delivery details will be outlined in the Supply and Quality Documentation and will be updated by the Parties by mutual agreement (which agreement can be effected by the Parties' Designated Supply contacts and without need for an amendment to this Agreement) based on the actual enrollment. The Recipient will promptly inform BMS of any change in its requirements, and BMS will endeavor to accommodate any change in the supply quantities requested by the Recipient so long as it does not unduly disrupt BMS's ongoing business activities.

4.5 Shortages. BMS shall provide the Recipient with prompt notice of any Manufacturing and supply issues with respect to the BMS Study Drug that may adversely impact the conduct or timelines of the Combined Therapy Clinical Trial. In the event of a supply interruption or shortage of BMS Study Drug as determined by BMS pursuant to its internal processes and policies (a "***Shortage***"), such that BMS reasonably believes that it will not be able to fulfill its supply obligations under this Agreement, BMS will provide prompt written notice thereof to the Recipient (including the quantity of BMS Study Drug that BMS reasonably estimates it will be able to supply) and, upon request, the Parties will promptly discuss such situation (including how the quantities of BMS Study Drug that BMS is able to supply under this

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Agreement will be allocated within the Combined Therapy Clinical Trial). Notwithstanding anything to the contrary contained herein, in the event of a Shortage of the BMS Study Drug, BMS will have sole discretion, subject to Applicable Law, to determine the quantity of BMS Study Drug it will be able to supply as a result of such Shortage; provided, however, that BMS shall consider in good faith the needs of patients who are actively being treated with BMS Study Drug, including Combined Therapy Clinical Trial patients, in making such determination. BMS will not be deemed to be in breach of this Agreement for failure to supply any other quantities of BMS Study Drug hereunder as a result of a Shortage. Any such allocation of the BMS Study Drug in accordance with this Section 4.5 will be the Recipient's exclusive remedy with respect to a Shortage.

4.6 Customs Valuation. The Recipient will provide BMS in writing with a list of each country in which it proposes to conduct the Combined Therapy Clinical Trial prior to execution of any site agreement or CRO agreement for that country. During the conduct of the Combined Therapy Clinical Trial, the Recipient will send in writing any changes to the list of participating countries to BMS one month prior to the end of each Quarter. If no changes are sent to BMS by the Recipient for a particular Quarter, the prior Quarter's participating country list will be used as the basis for customs valuation for that Quarter. BMS will provide the Recipient with country-specific customs valuations initially for the BMS Study Drug prior to initiation of the Combined Therapy Clinical Trial and at the end of each Quarter during the conduct of the Combined Therapy Clinical Trial. The Recipient will use the BMS provided values for the import/export process to the listed participating countries and not make any change to such valuations without BMS's prior written consent.

4.7 Designated Supply Contact. Each Party will designate an individual (the "***Designated Supply Contact***") that a Party may contact to assist with coordinating supplies and facilitating the resolution of any issues or concerns arising in connection with the supply of the BMS Study Drug for use in the Combined Therapy Clinical Trial.

ARTICLE 5

RESPONSIBILITIES

5.1 Specific Responsibilities of the Recipient. The Recipient shall, subject to the terms of the Protocol, applicable terms and conditions of this Agreement, and any other agreement between the Parties relating to the Combined Therapy Clinical Trial, manage and be responsible for the conduct of the Combined Therapy Clinical Trial, including timelines and contingency planning. In particular, and not in limitation of the foregoing, the Recipient shall perform (itself and/or through Third Parties, including clinical trial sites, CROs and investigators) and/or be responsible for the following (items (a) to (p) below, collectively the "***Operational Matters***") with respect to the Combined Therapy Clinical Trial:

(a) compiling, amending and filing all necessary Combined Therapy Clinical Trial Regulatory Documentation with Regulatory Authority(ies), maintaining and acting as the sponsor of record as provided in 21 CFR 312.50 (and applicable comparable ex-US laws) with responsibility, unless otherwise delegated in accordance with 21 CFR 312.52 (and applicable comparable ex-US laws), for the Combined Therapy Clinical Trial and making all required submissions to Regulatory Authorities related thereto on a timely basis;

(b) conducting clinical study start-up activities, communicating with and obtaining approval from IRBs for the Protocol and other relevant documents for the Combined Therapy Clinical Trial as applicable, as well as patient recruitment and retention activities;

(c) listing of the Combined Therapy Clinical Trial, if it is required to be listed on a public database on www.clinicaltrials.gov or other public registry in any country in which such Combined Therapy Clinical Trial is being conducted, all in accordance with Applicable Law and in accordance with its internal policies relating to clinical trial registration;

(d) providing BMS with reasonable advance notice of scheduled meetings or other pre-planned non-written communications with a Regulatory Authority and the opportunity to participate in each such meeting or other non-written communication, to the extent involving a safety, efficacy or toxicology issue relating to the Combined Therapy or the BMS Study Drug or any other matter related to the Combined Therapy or Combined Therapy Clinical Trial that it determines in its reasonable judgement could potentially have an adverse effect on the BMS Study Drug. In such case, the Recipient will provide BMS with the opportunity to review, provide comments to the Recipient within [ ]* on, and, if inconsistent with the Protocol, approve all submissions and written correspondence with a Regulatory Authority that relates to the BMS Study Drug;

(e) provide BMS (i) a written notice to the BMS Designated Clinical Contact (via email to the email address designated by BMS) of meetings or other substantive non-written communications with a Regulatory Authority within [ ]* of such meeting or communication, and if requested by BMS following such notice, a written summary of such meeting or communication within ten (10) days of such request, and (ii) copies of any official correspondence to or from a Regulatory Authority within [ ]* of receipt or provision, in each case of (i) or (ii) to the extent involving a safety, efficacy or toxicology issue relating to the Combined Therapy or the BMS Study Drug or any other matter related to the Combined Therapy or Combined Therapy Clinical Trial that it determines in its reasonable judgement could potentially have an adverse effect on the BMS Study Drug, and copies of all material Combined Therapy Clinical Trial Regulatory Documentation and correspondence that relates to same within [ ]* of submission to Regulatory Authorities;

(f) subject to the terms of this Agreement, the selection and payment of, negotiation of the terms of, contracting with, managing and overseeing compliance of its agreement by and the receipt of contract deliverables from, any CRO or vendor selected by the Recipient to assist in the performance of the Combined Therapy Clinical Trial. The Recipient shall determine and approve contract deliverables and manage contract performance, including executing site contracts, drafting and obtaining IRB approval for site informed consent forms (each an "***ICF***"), obtaining signed ICFs, monitoring plans, etc. The Recipient will be responsible for ensuring that all such contracts and ICFs: (i) do not conflict with the terms of this Agreement, (ii) allow the Recipient to provide BMS with access to and use of Study Data, Samples, and other information and documents as required pursuant to this Agreement (and in no event less than the same use rights granted to the Recipient), (iii) do not impose a new obligation, whether direct, indirect, or contingent, upon BMS that is not set forth in this Agreement, and (iv) retain each of the Parties' respective intellectual property rights in and access to the BMS Technology, BMS Independent Patent Rights, Study Data, Samples, Recipient Study Drug, BMS Study Drug and Combined Therapy consistent with this Agreement, and (vi) comply with Applicable Law;

(g) providing BMS (if requested by BMS) with copies of each final site template of the Combined Therapy Clinical Trial's ICF. The Recipient shall ensure that each ICF does not impose any financial obligation, liability, damages or other cost upon BMS with respect to any injury (including death) suffered by a Combined Therapy Clinical Trial subject whether or not resulting from the administration of the BMS Study Drug or direct a study subject to BMS to seek reimbursement for any costs or seek compensation for any injury incurred in connection with the Combined Therapy Clinical Trial;

(h) if requested by BMS, providing BMS within [ ]* with minutes from any and all external drug safety monitoring boards for the Combined Therapy Clinical Trial after receipt by the Recipient, to the extent relating to the BMS Study Drug or the Combined Therapy;

(i) informing and updating BMS on a [ ]* basis (with significant issues to be communicated promptly after the Recipient becomes aware of same) regarding all Operational Matters, so that if BMS has any significant concerns or material disagreements regarding same, the matter can be discussed with the Recipient. Without limiting the foregoing, the Recipient shall inform BMS [ ]* as to the overall Combined Therapy Clinical Trial progress, [ ]*, and any other Combined Therapy Clinical Trial-related matters requested by BMS to the extent involving a safety, efficacy or toxicology issue relating to the Combined Therapy or the BMS Study Drug or any other matter that could have an adverse effect on the BMS Study Drug;

(j) owning and being responsible for (or appointing a Third Party to be responsible for) the maintenance of the Global Safety Database and being responsible for safety reporting, collecting, evaluating and reporting Serious Adverse Events, other safety data and any further pharmacovigilance information from the Combined Therapy Clinical Trial;

(k) analyzing the Study Data in a timely fashion and providing BMS with access to the Study Data as follows:

(i) top line data and a copy of all Clinical Study Reports (CSRs), in each case, as and when received by the Recipient's clinical management;

(ii) if requested by BMS, sharing with BMS for review and comment drafts of interim and/or final clinical trial report (and/or statistical analysis in accordance with the Protocol) from the Combined Therapy Clinical Trial;

(iii) if requested by BMS, within [ ]* after database lock, access to those safety databases that will be used for any interim review by an external consultant (or drug safety monitoring board, if required);

(iv) if requested by BMS, within [ ]* after database lock, access to case report forms or patient profiles for all patients in the Combined Therapy Clinical Trial;

(v) if requested by BMS, within [ ]* of the creation of an electronic clean database for the Combined Therapy Clinical Trial, an electronic copy of the clean database (the form and format of the clean database to be reasonably acceptable to both Parties);

(vi) if requested by BMS, subject to any third party requirements, providing BMS with any programs or SAS codes to be used for any statistical analysis plan for the Combined Therapy Clinical Trial; and

(vii) (A) safety analyses, (B) new and/or changing Safety Signals and Safety Issues, (C) new and/or changing toxicology and efficacy signals, and (D) any statistical analysis, immunogenicity analysis, or bioanalysis, in each case relating to the BMS Study Drug, the Recipient Study Drug and/or the Combined Therapy, as and when the same are received by the Recipient;

(l) obtaining supplies of any co-medications, to the extent any such co-medications are required for use in the Combined Therapy Clinical Trial, and providing to BMS any information related to the Combined Therapy Clinical Trial that is provided to the manufacturer of any co-medication within [ ]* after the provision of the information to the manufacturer;

(m) if requested by BMS, information that Recipient has available to it as of such time (and with no duty to conduct any interim analysis) regarding either (i) the pharmacokinetics and safety of the Recipient Study Drug alone or (ii) the pharmacokinetics, efficacy and safety of the Recipient Study Drug in combination with the BMS Study Drug;

(n) performing either directly or through third parties collection of Samples required by the Protocol;

(o) handling and addressing inquiries from the Combined Therapy Clinical Trial subjects and investigators; and

(p) such other responsibilities as may be agreed to by the Parties.

5.2 BMS Operational Responsibilities. BMS shall be responsible for the following activities:

(a) Manufacturing and supplying GMP-grade quantities of the BMS Study Drug, as further described in Article 4 above, and, where and to the extent provided in the Supply and Quality Documentation, providing necessary GMP information and documentation that enables the Recipient Qualified Person (as such term will be defined in the Supply and Quality Documentation) to release BMS Study Drug for the Combined Therapy Clinical Trial;

(b) where and to the extent provided in the Supply and Quality Documentation, providing for the release by a Qualified Person or providing the necessary documentation in support of such quality release, of the BMS Study Drug if such release is required for the Combined Therapy Clinical Trial;

(c) to the extent necessary for the conduct of the Combined Therapy Clinical Trial, providing a Right of Cross-Reference to the relevant Regulatory Documentation for the BMS Study Drug as set forth in Section 2.1(b) and/or (e), if applicable, to the BMS investigator's brochure for the BMS Study Drug (and updates thereto) as provided in Section 2.1(d); and

(d) such other responsibilities as may be agreed to by the Parties.

5.3 Other Clinical Trials. Nothing in this Agreement shall preclude either Party from conducting any other clinical trials as it may determine in its discretion, so long as it does not use or rely on the Confidential Information that is solely owned by the other Party in doing so.

5.4 Potential Subsequent Studies. During the Term, each of the Parties agrees to discuss in good faith, for a period of no longer than [ ]*, additional Combined Therapy Clinical Trials of the BMS Study Drug with the Recipient Study Drug (and/or follow-on versions of the Recipient Study Drug). If the Parties jointly agree to conduct any such further clinical trials (each, a "***Subsequent Study***"), this Agreement and the Supply and Quality Documentation shall be amended to provide for such Subsequent Study under the terms thereof. The Parties agree to discuss whether it may be useful or desirable to include Ono as part of a Subsequent Study. For clarity, no Party shall be obligated to collaborate with the other Party or agree on terms with the other Party with respect to any additional clinical trials (or other collaboration opportunities) pursuant to this Section 5.4.

ARTICLE 6

INTELLECTUAL PROPERTY

6.1 Inventions and Related Patent Rights. All rights to Inventions shall be allocated as follows:

(a) Recipient Ownership. Subject to the terms of this Agreement, all Recipient Study Inventions and Recipient Study Patent Rights shall be owned solely by the Recipient, and the Recipient will have the full right to exploit such Recipient Study Inventions and Recipient Study Patent Rights without the consent of, or any obligation to account to, BMS. BMS shall assign and hereby assigns (and shall cause its Affiliates and contractors to assign) its right, title and interest in any Recipient Study Inventions and Recipient Study Patent Rights to the Recipient. BMS shall execute such further documents and provide

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other assistance as may be reasonably requested by the Recipient to perfect the Recipient's rights in such Recipient Study Inventions and Recipient Study Patent Rights, all at the Recipient's expense. The Recipient shall have the sole right but not the obligation to prepare, file, prosecute (including any proceedings relating to reissues, reexaminations, protests, interferences, oppositions, post-grant reviews or similar proceedings and requests for patent extensions) and maintain any Recipient Study Patent Rights at its own expense.

(b) BMS Ownership. Subject to the terms of this Agreement, all BMS Study Inventions shall be owned solely by BMS, and BMS will have the full right to exploit such BMS Study Inventions without the consent of, or any obligation to account to, the Recipient. The Recipient shall assign and hereby assigns (and shall cause its Affiliates and contractors to assign) all its right, title and interest in any BMS Study Inventions and BMS Study Patent Rights to BMS. The Recipient shall execute such further documents and provide other assistance as may be reasonably requested by BMS to perfect BMS's rights in such BMS Study Inventions and BMS Study Patent Rights, all at BMS's expense. BMS shall have the sole right but not the obligation to prepare, file, prosecute (including any proceedings relating to reissues, reexaminations, protests, interferences, oppositions, post-grant reviews or similar proceedings and requests for patent extensions) and maintain any BMS Study Patent Rights at its own expense.

(c) Combined Therapy Inventions.

(i) All Combined Therapy Inventions and Combined Therapy Patent Rights shall be jointly owned by the Parties, and either Party shall have the right to freely exploit the Combined Therapy Inventions and Combined Therapy Patent Rights, both within and outside the scope of this Agreement, without accounting or any other obligation to the other Party (except as expressly set forth in this Section 6.1(c) and Section 6.3(d) with regard to the filing, prosecution, maintenance and enforcement of Combined Therapy Patent Rights) and each Party may use, exploit and grant licenses (with right to sublicense) to Third Parties under its interest in such Combined Therapy Inventions and Combined Therapy Patent Rights. The Recipient, using outside counsel acceptable to both Parties, shall be responsible, at its sole discretion, for preparing and prosecuting Patent applications and maintaining Patents within the Combined Therapy Patent Rights. The Recipient shall keep BMS advised as to material developments and steps to be taken with respect to prosecuting any such Patent Rights and shall furnish BMS with copies of applications for such Patent Rights, amendments thereto and other related correspondence to and from patent offices, and permit BMS a reasonable opportunity to review and offer comments prior to submitting such applications and correspondence to the applicable governmental authority (and will take BMS's comments into account in preparing same). BMS shall reasonably assist and cooperate in obtaining, prosecuting and maintaining the Combined Therapy Patent Rights.

(ii) Notwithstanding the foregoing clause (i), the Recipient shall not take any position in a submission to a patent office concerning a Combined Therapy Invention that interprets the scope of a Patent Right of BMS without the prior written consent of BMS, provided that BMS has notified the Recipient in writing of the existence and scope of such BMS Patent Right. The Recipient shall be reimbursed for any costs and expenses incurred in prosecuting Combined Therapy Patent Rights and the subsequent maintenance of Combined Therapy Patent Rights by BMS such that BMS shall be responsible for [ ]* of such costs. From time-to-time, the Recipient shall invoice BMS such amounts and BMS shall pay the Recipient such invoiced amounts within thirty (30) days after receipt of an invoice therefor.

(iii) The Parties shall discuss in good faith the countries in which the Combined Therapy Patent Rights will be filed. In case one of the two Parties decides that Combined Therapy Patent Right should not be filed or maintained in a given country (and also elects not to reimburse the other Party for [ ]* of the costs of prosecution and maintenance of such Combined Therapy Patent Right in such country), the other Party shall have the right to file, prosecute and maintain such Combined Therapy Patent Right in such country in its own name and at its own expense upon the prior consent of the other Party, which shall not be unreasonably withheld, conditioned or delayed. In this case, the Party who decides that a Combined Therapy Patent Right should not be filed or maintained (and who also decides not to

*CONFIDENTIAL TREATMENT REQUESTED.

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reimburse the other Party for its share of the costs of for a given country shall promptly assign its rights to the Combined Therapy Patent Right in said country to the Party (the "***Filing Party***") who wishes to file or maintain said Combined Therapy Patent Right in such country and the Filing Party shall grant, and hereby grants, to the other Party an irrevocable, perpetual, fully-paid, non-exclusive license, with the right to grant and authorize sublicenses, under such Combined Therapy Patent Rights to make, have made, use, sell, offer for sale, import and other exploit products and services in such country. The Party who does not wish to file or maintain a Combined Therapy Patent Right in any country shall assist in the timely provision of all documents required under national provisions to register said assignment of rights with the corresponding national authorities at the sole expenses of the Party who wishes to file or maintain such Combined Therapy Patent Right in that given country. If the Parties cannot agree with respect to the decision to file or maintain a Combined Therapy Patent Right within [ ]* subsequent to the initiation of the Parties' good faith efforts to resolve any disagreement, then either Party (whichever files first) shall have the right to file or maintain any Combined Therapy Patent Right in the names of both Parties, provided that: (i) any such Combined Therapy Patent Right shall be jointly owned by the Parties and subject to the freedom to use and operate under such Combined Therapy Patent Right as set forth in the first sentence of this Section 6.1(c); (ii) such prosecuting Party obtains the prior consent of the non-prosecuting Party, which consent shall not be unreasonably withheld or delayed, and (iii) the non-prosecuting party reimburses the prosecuting party for its [ ]* share of the patent costs.

(d) Separation of Patent Rights. In order to more efficiently enable the prosecution and maintenance of the BMS Study Patent Rights, the Recipient Study Patent Rights and Combined Therapy Patent Rights relating to Inventions as described above, the Parties will use good faith efforts to separate BMS Study Patent Rights, the Recipient Study Patent Rights, Combined Therapy Patent Rights, BMS Independent Patent Rights and the Recipient Independent Patent Rights into separate patent filings to the extent possible and without adversely impacting such prosecution and maintenance or the scope of the protected subject matter.

6.2 Disclosure and Assignment of Inventions; Ownership of Independent Patent Rights. Each Party shall disclose promptly to the other Party in writing and on a confidential basis all Inventions, prior to any public disclosure thereof or filing of Patent Rights therefor and allowing sufficient time for comment by the other Party. In addition, each Party shall, and does hereby, assign, and shall cause its Affiliates and contractors to so assign, to the other Party, without additional compensation, such right, title and interest in and to any Inventions as well as any Patent Rights and other intellectual property rights with respect thereto, as is necessary to fully effect, as applicable, the sole ownership provided for in Sections 6.1(a) and 6.1(b) and the joint ownership provided for in Section 6.1(c). Each Party shall ensure that each of its employees and contractors conducting activities under this Agreement is under written obligation to assign all right, title and interest in and to all Inventions and Study Data and all intellectual property rights therein to such Party. Except for the license granted in Section 3.1, nothing in this Agreement shall be construed to grant or transfer to Recipient any rights in the BMS Independent Patent Rights, which shall be the sole and exclusive property of BMS, and nothing in this Agreement shall be construed to grant or transfer to BMS any rights in the Recipient Independent Patent Rights, all of which shall be the sole and exclusive property of Recipient.

6.3 Infringement of Patent Rights by Third Parties.

(a) Notice. Each Party shall promptly notify the other Party in writing of any Infringement of Combined Therapy Patent Rights, of which its in-house patent counsel becomes aware.

(b) Infringement of Recipient Study Patent Rights. For all Infringements of Recipient Study Patent Rights anywhere in the world, the Recipient shall have the exclusive right to prosecute such Infringements as it may determine in its sole and absolute discretion, and the Recipient shall bear all related expenses and retain all related recoveries. BMS shall reasonably cooperate with the

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Recipient or its designee (to the extent BMS has relevant information arising out of this Agreement), at the Recipient's request and expense, in any such action.

(c) Infringement of BMS Study Patent Rights. For all Infringements of BMS Study Patent Rights anywhere in the world, BMS shall have the exclusive right to prosecute such Infringements as it may determine in its sole and absolute discretion, and BMS shall bear all related expenses and retain all related recoveries. The Recipient shall reasonably cooperate with BMS or its designee (to the extent that the Recipient has relevant information arising out of this Agreement), at BMS's request and expense, in any such action.

(d) Infringement of Combined Therapy Patent Rights.

(i) With respect to Infringements of Combined Therapy Patent Rights, the Parties shall mutually agree as to whether to bring an enforcement action to seek the removal or prevention of such Infringements and damages therefor and, if so, which Party shall bring such action, with any costs and expenses relating thereto to be allocated in accordance with Section 6.3(d)(ii).

(ii) Regardless of which Party brings an enforcement action pursuant to Section 6.3(d)(i) or whether the Parties reach agreement to initiate such an enforcement action, the other Party hereby agrees to cooperate reasonably in any such action, including, if required, by bringing a legal action, furnishing a power of attorney or jointing as a plaintiff to such a legal action. If the Parties mutually agree to bring an enforcement action, BMS shall be responsible for [ ]*, and the Recipient shall be responsible for [ ]*, of the reasonable and verifiable costs and expenses incurred in connection with any such action. If either Party recovers monetary damages from any Third Party in an action agreed to by the Parties, such recovery shall be allocated first to the reimbursement of any actual, unreimbursed costs and expenses incurred by the Parties in such litigation (including, for this purpose, a reasonable allocation of expenses of internal counsel) pro rata in accordance with the aggregate amounts spent by both Parties, and any remaining amounts shall be split [ ]* to the Recipient and [ ]* to BMS, unless the Parties agree in writing to a different allocation. If the Parties do not agree to initiating such an enforcement action, (A) the Party initiating such enforcement action shall be responsible for the costs and expenses incurred in connection with such action and shall reimburse the other Party for the costs the other Party incurs for the assistance and cooperation requested by such Party and (B) the Party initiating such enforcement action shall retain all recoveries from such enforcement action. In connection with any proceeding under this Section 6.3(d), neither Party shall enter into any settlement without the prior written consent of the other Party.

6.4 Infringement of Third Party Rights.

(a) Notice. If the activities relating to the Combined Therapy Clinical Trial become the subject of a claim of infringement of a patent, copyright or other proprietary right by a Third Party anywhere in the world, the Party first having notice of the claim shall promptly notify the other Party and, without regard to which Party is charged with said infringement and the venue of such claim, the Parties shall promptly confer to discuss the claim.

(b) Defense. If both Parties are charged with infringement pursuant to a claim described in Section 6.4(a), each Party shall have the right to defend itself against such claim and the Parties shall discuss in good faith defending such claim jointly. If only one Party is charged with infringement, such Party will have the first right but not the obligation to defend such claim. If the charged Party does not commence actions to defend such claim within thirty (30) calendar days after request by the other Party to do so, then the other Party shall have the right, but not the obligation, to defend any such claim to the extent such claim pertains to the other Party's Compound. In any event, the non-defending Party shall reasonably cooperate with the Party conducting the defense of the claim and shall have the right to participate with separate counsel at its own expense, and the defending Party shall consider comments and

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suggestions on strategy for defending the action by the non-defending Party in good faith. The Party defending the claim shall bear the cost and expenses of the defense of any such Third Party infringement claim and shall have sole rights to any recovery. If the Parties jointly defend the claim, the Recipient shall bear [ ]*, and BMS shall bear [ ]* of any costs and expenses of the defense of any such Third Party infringement claim; *provided, however, that,* notwithstanding the foregoing, if the claim relates solely to one Party's Compound, such Party will bear one hundred percent (100%) of the costs and expenses of the defense of such claim and shall have the sole right, but not the obligation, to defend, settle and otherwise handle the disposition of such claim. Neither Party shall enter into any settlement concerning activities under this Agreement or the Combined Therapy that affects the other Party's rights under this Agreement or imposes any obligations on the other Party, including any admissions of wrongdoing on behalf of the other Party, without such other Party's prior written consent, not to be unreasonably withheld or delayed, except that a Party may settle any claim that solely relates to its Compound without the consent of the other Party as long as such other Party's rights under this Agreement are not adversely impacted (in which case, it will obtain such other Party's prior written consent, not to be unreasonably withheld or delayed). If any claim described in this Section 6.4(b) is subject to a Party's indemnification obligations under Article 11, then Article 11 shall govern such claim and not this Section 6.4(b).

6.5 Combined Therapy Clinical Trial Regulatory Documentation. Subject to the license and other rights granted by each Party to the other Party pursuant to this Agreement, the Recipient shall solely own all right, title and interest in and to the Combined Therapy Clinical Trial Regulatory

Documentation; *provided, however, that* BMS shall retain sole and exclusive ownership of any BMS Regulatory Documentation that is submitted with or referenced in the Combined Therapy Clinical Trial Regulatory Documentation and that the Recipient shall retain sole and exclusive ownership of any Recipient Regulatory Documentation that is submitted with or referenced in the Combined Therapy Clinical Trial Regulatory Documentation. This Section 6.5 is without limitation of any other disclosure obligations under this Agreement.

6.6 No Other Use. Except as expressly provided in Section 6.1, the Recipient agrees not to make or file any Patent Rights application based on or containing BMS Confidential Information, and to give no assistance to any Third Party for such application without BMS's prior written authorization, and BMS agrees not to make or file any Patent Rights application based on or containing the Recipient's Confidential Information, and to give no assistance to any Third Party for such application without the Recipient's prior written authorization.

6.7 Joint Research Agreement. The Parties acknowledge and agree that this Agreement is a "joint research agreement" as defined in 35 USC § 100 (h).

ARTICLE 7

COSTS AND EXPENSES

7.1 Manufacturing and IP Costs. Expenses incurred as described in Article 4 (regarding Manufacturing and Supply) and Article 6 (regarding Intellectual Property) shall be borne or shared by the Parties as provided in such Articles.

7.2 TP Study Costs. For all expenses (other than those set forth in section 7.1) that are directly attributable or reasonably allocable to the conduct of the Combined Therapy Clinical Trial: (a) the Recipient will solely bear all out-of-pocket costs reasonably incurred by the Recipient (or by BMS pursuant to the following sentence) to Third Parties (including to CROs, laboratories and clinical sites/IRBs) in connection with the performance of the Combined Therapy Clinical Trial ("***TP Study Costs***"), and (b) each Party shall

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be solely responsible for all of its own internal costs (including costs of individual independent contractors) incurred by such Party or any of its Affiliates. It is not expected that BMS will incur any TP Study Costs; however, in the event BMS should incur any TP Study Costs in connection with the conduct of the Combined Therapy Clinical Trial as contemplated by the budget therefor or as previously agreed to in writing by the Parties, the Recipient will reimburse BMS for same on a [ ]* following submission of an invoice therefor and appropriate supporting documentation.

7.3 Third Party License Payments. If the conduct of the Combined Therapy Clinical Trial requires a Third Party License Payment with respect to the manufacture, supply and use of the BMS Study Drug used in the Combined Therapy Clinical Trial, then BMS shall be responsible for the payment of any such Third Party License Payment. If the conduct of the Combined Therapy Clinical Trial requires a Third Party License Payment with respect to the manufacture, supply and use of the Recipient Study Drug used in the Combined Therapy Clinical Trial, then Recipient shall be responsible for the payment of any such Third Party License Payment.

ARTICLE 8

RECORDS AND STUDY DATA

8.1 Records. Each Party shall maintain complete and accurate records of all work conducted with respect to the Combined Therapy Clinical Trial and of all results, information, data, data analyses, reports, records, methods, processes, practices, formulae, instructions, skills, techniques, procedures, experiences and developments made by or provided to either Party, or by the Parties together, in the course of such Party(ies)' efforts with respect to the Combined Therapy Clinical Trial (including any statistical analysis plan and any bioanalysis plan to be conducted pursuant to the Protocol or otherwise agreed to by the Parties) (such results, information, data, data analyses, reports, case report forms, adverse event reports, trial records, methods, processes, practices, formulae, instructions, skills, techniques, procedures, experiences, developments, and the Protocol referred to as the "***Study Data***"). Such records shall fully and properly reflect all work done and results achieved in the performance of the Combined Therapy Clinical Trial in sufficient detail and in good scientific manner appropriate for patent and regulatory purposes.

8.2 Ownership of Study Data. BMS shall own the Study Data to the extent that it relates exclusively to the BMS Study Drug ("***BMS Study Data***"), and the Recipient shall own the Study Data to the extent that it relates exclusively to the Recipient Study Drug ("***Recipient Study Data***"). Both Parties shall jointly own any Study Data that does not relate exclusively to the Recipient Study Drug or the BMS Study Drug ("***Combined Therapy Study Data***"). Each Party shall, and does hereby, assign, and shall cause its Affiliates to so assign, to the other Party, without additional compensation, such right, title and interest in and to any Study Data as is necessary to fully effect the foregoing, and agrees to execute all instruments as may be reasonably necessary to effect same.

8.3 Use of Study Data.

(a) Use of a Party's Own Study Data. BMS may use and analyze the BMS Study Data for any purpose without obligation or accounting to the Recipient, who shall hold the BMS Study Data in confidence pursuant to this Agreement. The Recipient may use and analyze the Recipient Study Data for any purpose without obligation or accounting to BMS, who shall hold the Recipient Study Data in confidence pursuant to this Agreement.

(b) Use of Combined Therapy Study Data by BMS. BMS, Ono, and their respective Affiliates and (sub)licensees shall have the right to use and analyze the Combined Therapy Study Data (i) in connection with the independent development, commercialization or other exploitation of the BMS Study Drug (alone or in combination with other drugs and/or other pharmaceutical agents) and/or for inclusion in the safety database for the BMS Study Drug, in each case without the consent of, or any obligation to

account to, the Recipient, and (ii) to conduct studies with Samples pursuant to Section 8.5. Subject to Section 8.5, the results of all such analyses or uses shall be owned by BMS, including any intellectual property arising out of same, unless the Parties shall have agreed otherwise in a writing separate from this Agreement. BMS, Ono, and their respective Affiliates and (sub)licensees shall also be entitled to use the Combined Therapy Study Data during and following the Term to (1) make regulatory filings, meet regulatory requirements, and seek approvals for the BMS Study Drug, either alone or as part of the Combined Therapy, (2) evaluate the safety and efficacy of the Combined Therapy and the BMS Study Drug, (3) promote indications based on, and to disseminate, the Combined Therapy Study Data for the benefit of the BMS Study Drug, either alone or as part of the Combined Therapy, where permitted by and in accordance with Applicable Law; *provided that* nothing in the foregoing is intended or shall be construed as granting BMS any right or license, expressly or impliedly to make, have made, use, sell, offer for sale, or import the Recipient Study Drug; and (4) include in Patent Rights filings made in the course of the prosecution of BMS Independent Patent Rights that do not Cover both the composition of matter of the Recipient Study Drug, its manufacture or formulation, method of use and the BMS Study Drug. The Recipient grants BMS, Ono, their respective Affiliates and (sub)licensees (of rights to the BMS Study Drug) a Right of Cross-Reference to the Recipient Regulatory Documentation Controlled by Recipient for the Recipient Study Drug and the Combined Therapy Clinical Trial Regulatory Documentation for the Recipient Study Drug or the Combined Therapy for the sole purpose of enabling BMS, Ono, and their Affiliates and sublicensees to exercise its rights under clause (1) of this Section 8.3(b), which right shall survive any expiration or termination of this Agreement.

(c) Use of Combined Therapy Study Data by the Recipient. The Recipient and its Affiliates and licensees shall have the right to use and analyze the Combined Therapy Study Data (i) in connection with the independent development, commercialization or other exploitation of the Recipient Study Drug (alone or in combination with other drugs and/or other pharmaceutical agents) and/or for inclusion in the safety database for the Recipient Study Drug, in each case without the consent of, or any obligation to account to, BMS and (ii) to conduct studies with Samples pursuant to Section 8.5. Subject to Section 8.5, the results of all such analyses or uses shall be owned by the Recipient, including any intellectual property arising out of same, unless the Parties shall have agreed otherwise in writing separate from this Agreement. The Recipient, its Affiliates and (sub)licensees shall be entitled to use the Combined Therapy Study Data during and following the Term to (1) make regulatory filings, meet regulatory requirements and seek approvals for the Recipient Study Drug, either alone or as part of the Combined Therapy, (2) evaluate the safety and efficacy of the Combined Therapy and the Recipient Study Drug, (3) promote indications based on, and to disseminate, the Combined Therapy Study Data for the benefit of the Recipient Study Drug, either alone or as part of the Combined Therapy, where permitted by and in accordance with Applicable Law; *provided that* nothing in the foregoing is intended or shall be construed as granting the Recipient any right or license, expressly or impliedly, to make, have made, use, sell, offer for sale, or import the BMS Study Drug; and (4) and include in Patent Rights filings made in the course of the prosecution of Recipient Independent Patent Rights that do not Cover both the composition of matter of the BMS Study Drug, its manufacture or formulation, method of use and the Recipient Study Drug. BMS grants the Recipient, its Affiliates and licensees of the Recipient Study Drug a Right of Cross-Reference to the relevant Regulatory Documentation Controlled by BMS for the BMS Study Drug for the sole purpose of enabling the Recipient, its Affiliates and (sub)licensees to exercise its rights under clause (1) of this Section 8.3(c) (for clarity, such Right of Cross-Reference shall not extend to any Ono-controlled Regulatory Documentation) in all countries and territories of the world, which right shall survive any expiration or termination of this Agreement.

(d) Biomarker/Dx Agent Development. Each Party may use and disclose to a Third Party the Combined Therapy Study Data and its Compound's Study Data, under obligations of confidentiality consistent with this Agreement, to develop and commercialize a biomarker or diagnostic test for use with its Compound (including without limitation another combination therapy involving its Compound) and/or the Combined Therapy, and, unless otherwise mutually agreed by the Parties in writing,

will own any intellectual property arising out of the work funded or conducted by it with or through such Third Party. Each Party shall grant, and hereby grants, to the other Party a worldwide, perpetual, irrevocable, fully paid-up, royalty-free non-exclusive license, with the right to grant and authorize sublicenses, under such intellectual property and data to develop and commercialize biomarkers and/or diagnostic tests for use with the Combined Therapy. The Parties will discuss in good faith any opportunities to jointly participate in the development of any such biomarker or diagnostic test for use with the Combined Therapy.

(e) No Other Uses. All other uses of Combined Therapy Study Data (by either Party), Recipient Study Data (by BMS) and BMS Study Data (by the Recipient) are limited solely to those permitted by this Agreement, and neither Party may use such Study Data for any other purpose without the consent of the other Party during and after the Term.

8.4 Access to Study Data. Subject to the provisions of Sections 8.1, each Party shall have access to all Combined Therapy Study Data, Recipient Study Data and BMS Study Data (including de-identified patient records). The relevant Party shall make such Study Data in its possession available to the other Party within a reasonable period, not to exceed [ ]*, after such Study Data is available to or generated by the applicable Party.

8.5 Samples.

(a) Samples shall be jointly owned by the Parties (to the extent not owned by the patient and/or the clinical trial site). Any such Samples shall be collected in accordance with the Protocol and applicable ICFs. Except as set forth in the Protocol, neither Party shall be permitted to use such Samples for any purpose without the prior written consent of the other Party, which consent shall not be unreasonably withheld if such use is directed to the Combined Therapy and with the terms of such use to be set forth in a written agreement between the Parties setting forth the Samples to be used, and any appropriate terms/restrictions on such use. For clarity, Replimune shall have the right, without further consent of BMS, to use and study any such Samples as set forth in the Protocol, it being understood that if the Protocol does not reference specific assays to be utilized in the analysis of any such Samples and such analysis will be in the discretion of Replimune. Except for intellectual property pertaining solely to the [ ]* (which shall be owned by BMS), any data and intellectual property arising out of such Sample use shall be owned by the Party conducting such study using same, *provided that*, to the extent that any such data or intellectual property relates solely to the Combined Therapy (or biomarkers solely for use with the Combined Therapy), shall be considered Combined Therapy Study Data, Combined Therapy Inventions and/or Combined Therapy Patent Rights, as the case may be. All Samples, including Samples for PK and ADA serum analysis will be stored for future use in the Recipient's sample repository, unless the Parties mutually agree that BMS would store such samples, *provided that*, if the Party holding the Samples determines that it no longer has a use for the Samples and the other Party determines that it does, then the Samples shall, subject to Applicable Law and the terms of the signed ICFs, be transferred to the other Party and may be used solely thereafter by the other

Party. If neither Party has any further use for the Samples, then the remaining Samples will be destroyed pursuant to the respective Party's standard operating procedures for sample retention and destruction, subject to the terms of and permission(s) granted in the informed consent forms signed by the subjects contributing the Samples in the Combined Therapy Clinical Trial.

(b) If required by a Regulatory Authority or necessary as part of the Protocol or related bioanalysis plan, BMS will arrange for the Recipient to use BMS's preferred Third Party vendor(s), at the Recipient's expense, for bioanalytical work of Samples from Combined Therapy Clinical Trial subjects on the BMS Study Drug. Such vendor(s) will provide the results of their bioanalytical work of such Samples to the Recipient and BMS, which results will be included in the final clinical study report, along with the bioanalytical work of the Recipient Study Drug and BMS Study Drug performed by or on behalf of the Recipient. For the avoidance of doubt, all bioanalytical results for the BMS Study Drug and

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the Recipient Study Drug are deemed Study Data. All data derived pursuant to the Protocol from such Samples is deemed Study Data.

ARTICLE 9

CONFIDENTIALITY

9.1 Nondisclosure of Confidential Information.

(a) Prior to the Effective Date, the Recipient and BMS entered into a certain Confidentiality Agreement dated March 27, 2017 (the "***CDA***"). As it relates to disclosures involving the BMS Study Drug, the Recipient Study Drug or the conduct of the Combined Therapy Clinical Trial only, the CDA is hereby terminated and replaced by the terms of this Agreement. Any Confidential Information relating thereto previously disclosed by the Parties pursuant to the CDA shall now be Confidential Information for purposes of this Agreement and the Parties shall treat it as such in accordance with the terms hereof. All written, visual, oral and electronic data, information, know-how or other proprietary information or materials, both technical and non-technical, disclosed by one Party to the other Party pursuant to this Agreement, and disclosed in the manner specified herein, that (a) if in tangible form, is labeled in writing as "proprietary" or "confidential" (or similar reference), or (b) if in oral or visual form, is identified as proprietary or confidential or for internal use only at the time of disclosure or within thirty (30) calendar days thereafter shall be "***Confidential Information***" of the disclosing Party, and all Study Data and Inventions shall be the Confidential Information of the Party (or Parties) owning such Study Data or Invention (as provided in Section 8.2 with regard to Study Data and Section 6.1 with regard to Inventions). For purposes of this Agreement, regardless of which Party discloses such Confidential Information to the other, (i) all Recipient Study Inventions, Recipient Technology and Recipient Regulatory Documentation shall be Confidential Information of the Recipient and BMS shall be the receiving Party, and (ii) all BMS Study Inventions, BMS Technology, and BMS Regulatory Documentation shall be Confidential Information of BMS and the Recipient shall be the receiving Party.

(b) The Parties agree that the terms of this Agreement shall be treated as Confidential Information of both Parties, and thus may be disclosed only as permitted by Section 9.3. Except as required by Applicable Law, each Party agrees not to issue any press release or public statement disclosing information relating to this Agreement or the transactions contemplated hereby or the terms hereof without the prior written consent of the other Party, except as permitted by Sections 9.3 and 9.6(b).

(c) Except to the extent expressly authorized in this Section 9.1 and Sections 9.2, 9.3 and 9.6 below, or as otherwise agreed in writing by the Parties, each Party agrees that, for the Term and for a period of [ ]* thereafter, it shall (A) keep confidential and shall not publish or otherwise disclose and shall not use for any purpose other than as expressly provided for in this Agreement any Confidential Information of the other Party (including information relating to this Agreement or the transactions contemplated hereby or the terms hereof), (B) treat the other Party's Confidential Information with the same degree of care the receiving Party uses for its own confidential information but in no event with less than a reasonable degree of care; and (C) reproduce the disclosing Party's Confidential Information solely to the extent necessary or reasonably useful to accomplish the receiving Party's obligations under this Agreement or exercise the receiving Party's rights to use and disclose such Confidential Information as expressly provided for in this Agreement, with all such reproductions being considered the disclosing Party's Confidential Information, *provided that*, with respect to BMS Confidential Information that was received as confidential information from Ono, the obligations of confidentiality and nonuse shall continue until BMS has obtained Ono's written consent that the same may be freely used. Notwithstanding anything to the contrary in this Section 9.1, and subject to Section 8.3, the receiving Party may disclose the disclosing Party's Confidential Information to its employees, consultants, agents or permitted (sub)licensees solely on a need-to-know basis for the purpose of fulfilling the receiving Party's obligations under this Agreement or exercising the receiving

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Party's rights to use and disclose such Confidential Information as expressly provided for in this Agreement; *provided, however, that* (1) any such employees, consultants, agents or permitted (sub)licensees are bound by obligations of confidentiality and non-use at least as restrictive as those set forth in this Agreement, and (2) the receiving Party remains liable for the compliance of such employees, consultants, agents or permitted (sub)licensees with such obligations. Each receiving Party acknowledges that in connection with its and its representatives examination of the Confidential Information of the disclosing Party, the receiving Party and its representatives may have access to material, non-public information, and that the receiving Party is aware, and will advise its representatives who are informed as to the matters that are the subject of this Agreement, that State and Federal laws, including United States securities laws, may impose restrictions on the dissemination of such information and trading in securities when in possession of such information. Each receiving Party agrees that it will not, and will advise its representatives who are informed as to the matters that are the subject of this Agreement to not, purchase or sell any security of the disclosing Party on the basis of the Confidential Information to the extent such Confidential Information constitute material nonpublic information about the disclosing Party or such security.

(d) Combined Therapy Study Data shall be treated as Confidential Information of each Party and shall not be disclosed to Third Parties except to the extent it falls within the exceptions set forth in Section 9.2 below, is authorized under this Section 9.1 or Section 9.3, is required to be

filed with a Regulatory Authority or included in a product's label or package insert, is reasonably necessary to be disclosed in order for a Party to exercise its rights under Section 8.3(b) or 8.3(c) or it is disclosed pursuant to Section 9.5.

9.2 Exceptions. The obligations in Section 9.1 shall not apply with respect to any portion of Confidential Information that the receiving Party can demonstrate by contemporaneous tangible records or other competent proof:

(a) was already known to the receiving Party (or its Affiliates), other than under an obligation of confidentiality, either (i) at the time of disclosure by the disclosing Party, or (ii) if applicable, at the time that it was generated hereunder, whichever ((i) or (ii)) is earlier;

(b) was generally available to the public or otherwise part of the public domain either (i) at the time of its disclosure to the receiving Party, or (ii) if applicable, at the time that it was generated hereunder, whichever ((i) or (ii)) is earlier;

(c) became generally available to the public or otherwise part of the public domain after its disclosure and other than through any act or omission of the receiving Party in breach of this Agreement;

(d) was disclosed to the receiving Party (or its Affiliates), other than under an obligation of confidentiality, by a Third Party who had no obligation to the Party owning or Controlling the information not to disclose such information to others; or

(e) was independently discovered or developed by the receiving Party (or its Affiliates) without the use of, or reference to, the Confidential Information belonging to the disclosing Party.

9.3 Authorized Disclosure. Notwithstanding any other provision of this Agreement, each Party may disclose Confidential Information belonging to the other Party to the extent such disclosure is reasonably necessary in the following instances:

(a) filing or prosecuting Patent Rights pursuant to Section 6.1(c);

(b) prosecuting or defending litigation;

(c) complying with Applicable Law or the rules or regulations of any securities exchange on which such Party's stock is listed;

(d) disclosure, in connection with the performance of this Agreement, to Affiliates, permitted (sub)licensees, contractors, IRBs, CROs, academic institutions, consultants, agents, investigators, and employees and contractors engaged by study sites and investigators involved with the Combined Therapy Clinical Trial, each of whom prior to disclosure must be bound by terms of confidentiality and non-use at least as protective of Confidential Information as those set forth in this Article 9;

(e) disclosure of the Combined Therapy Study Data, Combined Therapy Inventions and Combined Therapy Patent Rights to Regulatory Authorities in connection with the development and obtaining of regulatory approval of the Combined Therapy, the Recipient Study Drug or the BMS Study Drug;

(f) disclosure of relevant safety information contained within the Combined Therapy Study Data to investigators, IRBs and/or ethics committees and Regulatory Authorities that are involved in other clinical trials of the Recipient Study Drug with respect to the Recipient, and the BMS Study Drug with respect to BMS, and, in the event of a Material Safety Issue, to Third Parties that are collaborating with the Recipient or BMS, respectively in the conduct of such other clinical trials of the Recipient Study Drug or the BMS Study Drug, in each case solely to the extent necessary for the conduct of such clinical trials and/or to comply with Applicable Law and regulatory requirements; and

(g) subject to a [ ]* advance written notice to BMS, in communications with [ ]* under confidentiality provisions as least as protective of Confidential Information as those of this Agreement; *provided* that with respect to [ ]* such disclosure shall be limited to the terms and conditions of this Agreement and the Combined Therapy Study Data.

Notwithstanding the foregoing, if a Party is required or otherwise intends to make a disclosure of any other Party's Confidential Information pursuant to Section 9.3(b) and/or Section 9.3(c), it shall give advance notice to such other Party of such impending disclosure and endeavor in good faith to secure confidential treatment of such Confidential Information and/or reasonably assist the Party that owns such Confidential Information in seeking a protective order or other confidential treatment.

9.4 Disclosure to Ono. Notwithstanding any other provision of this Agreement, BMS shall be entitled to disclose to Ono (a) the existence (but not the terms) of this Agreement, the Combined Therapy Clinical Trial and the Protocol, and (b) any other Recipient Confidential Information necessary for BMS to fulfill its obligations to Ono under the Ono-BMS Agreements; *provided that* Ono is under confidentiality obligations at least as restrictive as set forth herein. BMS shall be free to disclose to Ono and permit Ono to use the BMS Study Data and the Combined Therapy Study Data as BMS may determine (so long as such use is consistent with BMS's permitted uses under Section 8.3(b)).

9.5 Press Releases and Publications.

(a) The Parties shall jointly agree to the content and timing of all public communications with respect to this Agreement, press releases, Q&As, and the content of, and wording for, any listing of the Combined Therapy Clinical Trial required to be listed on a public database or other public registry such as www.clinicaltrials.gov). For clarity, if either Party terminates this Agreement pursuant to Section 12.4, the Parties shall mutually agree upon any external communication related to such termination, which shall not include the rationale for such termination unless (and to the extent) mutually agreed by the Parties. Notwithstanding the foregoing in this Section 9.5(a), either Party shall be permitted to publicly disclose information that such Party determines in good faith is necessary to be disclosed to comply with

Applicable Law or the rules or regulations of any securities exchange on which such Party's stock may be listed, or pursuant to an order of a court or governmental entity.

(b) The Recipient and BMS agree to collaborate to publicly disclose, publish or present (i) top-line results from the Combined Therapy Clinical Trial, limited if possible to avoid jeopardizing the future publication of the Study Data at a scientific conference or in a scientific journal, solely for the purpose of disclosing, as soon as reasonably practicable, the safety or efficacy results and conclusions that are material to either Party under applicable securities laws, and (ii) the conclusions and outcomes (the "***Results***") of the Combined Therapy Clinical Trial at a scientific conference as soon as reasonably practicable following the database lock date for such Combined Therapy Clinical Trial, subject in the case of (ii) to the following terms and conditions. The Party proposing to disclose, publish or present the Results shall deliver to the other Party a copy of the proposed disclosure, publication or presentation at least [ ]* before submission to a Third Party. The reviewing Party shall determine whether any of its Confidential Information that may be contained in such disclosure, publication or presentation should be modified or deleted, whether to file a patent application on any Recipient Study Invention (solely with respect to the Recipient) or BMS Study Invention (solely with respect to BMS) or Combined Therapy Invention disclosed therein. The disclosure, publication or presentation shall be delayed for an additional [ ]* (i.e., a total of [ ]* from the initial proposal) if the reviewing Party reasonably requests such extension to allow time for the preparation and filing of relevant patent applications consistent with the terms of this Agreement. If the reviewing Party reasonably requests modifications to the disclosure, publication or presentation to prevent the disclosure of Confidential Information of the reviewing Party (other than the Results or Study Data), the publishing Party shall edit such publication to prevent the disclosure of such information prior to submission of the disclosure, publication or presentation. In the event of a disagreement as to content, timing and/or venue or forum for any disclosure, publication or presentation of the Results, such dispute (a "***Publication Dispute***") shall be referred to the Executive Officers (or their respective designees); provided that, in the absence of agreement after such good faith discussions, and upon expiration of the additional [ ]* -period, (A) academic collaborators or clinical trial sites engaged by the Recipient in connection with the performance of the Combined Therapy Clinical Trial may publish Combined Therapy Study Data obtained by such academic collaborator or clinical trial site solely to the extent that such ability to publish such Combined Therapy Study Data is set forth in an agreement between the Recipient and such academic collaborator or clinical trial site relating to the conduct of Combined Therapy Clinical Trial and (B) the publishing Party may proceed with the disclosure, publication or presentation provided that such disclosure, publication or presentation is consistent with its internal publication guidelines and customary industry practices for the publication of similar data and does not disclose the Confidential Information of the other Party (other than the Results or Study Data). Authorship of any publication shall be determined based on the accepted standards used in peer-reviewed academic journals at the time of the proposed disclosure, publication or presentation. The Parties agree that they shall make reasonable efforts to prevent publication of a press release that could jeopardize the future publication of Study Data at a scientific conference or in a scientific journal but in no way will this or any other provision of this Agreement supersede the requirements of any Applicable Law or the rules or regulations of any securities exchange or listing entity on which a Party's stock is listed (including any such rule or regulation that may require a Party to make public disclosures about interim results of the Combined Therapy Clinical Trial). Notwithstanding the foregoing, nothing herein shall prevent or restrict Ono from making any disclosures of published Study Data disclosed to it by BMS pursuant to Section 9.4 or of the existence of this Agreement, in each case in order for Ono to comply with requirements of Applicable Law, the rules or regulations of any securities exchange or listing entity on which its stock may be traded or pursuant to an order of a court or governmental entity to publicly disclose the existence of the Agreement and the Study Data, provided that if any such disclosure is made

*CONFIDENTIAL TREATMENT REQUESTED.

by Ono it will only disclose the minimum amount of information necessary to achieve compliance and will provide the Recipient with reasonable advance notice of such disclosure.

(c) The Recipient agrees to include in all permitted press releases, presentations and publications it makes related to the Combined Therapy Clinical Trial specific mention, if applicable, of the BMS Study Drug and the support and involvement of BMS. BMS agrees to include in all permitted press releases, presentations and publications it makes related to the Combined Therapy Clinical Trial specific mention, if applicable, of the Recipient Study Drug and the support and involvement of the Recipient.

9.6 Compliance with Sunshine Laws.

(a) For purposes of compliance with reporting obligations under Sunshine Laws, as between the Parties, the Recipient/the Recipient represents that it is not, as of the Effective Date, subject to reporting obligations under the Sunshine Laws. Therefore, as between the Parties, BMS will report payments or other transfers of value ("***POTV***") made by the Recipient or the CRO related to the conduct of the Combined Therapy Clinical Trial and any applicable associated contractor engagements as required under the Sunshine Laws for the Combined Therapy Clinical Trial. BMS shall request delayed publication for any reported POTV for studies sponsored by the Recipient as permitted under the Sunshine Laws and if consistent with BMS's normal business practices. In the event that the Recipient becomes responsible for reporting POTV for studies sponsored by it in a given country during the Term, the Recipient shall provide written notification to BMS and the Parties will meet to confer to discuss how they wish to handle reporting thereafter. Interpretation of the Sunshine Laws for purposes of reporting any POTV by a Party shall be in such Party's sole discretion so long as the interpretation complies with Applicable Law.

(b) The Recipient (i) will provide (to the extent in the possession of the Recipient), or will utilize Commercially Reasonable Efforts to obligate and ensure that each CRO and other applicable Third Party contractors for the Combined Therapy Clinical Trial provides, BMS with any information requested by BMS as BMS may reasonably determine is necessary for BMS to comply with its reporting obligations under Sunshine Laws (with such amounts paid to, or at the direction of, healthcare providers, teaching hospitals and/or any other persons for whom POTVs must be reported under Sunshine Laws to be reported to BMS within a reasonable time period specified by BMS) and (ii) will reasonably cooperate with, and will utilize Commercially Reasonable Efforts to obligate and ensure that each CRO and other applicable Third Party contractors for the Combined Therapy Clinical Trial reasonably cooperates with, BMS in connection with its compliance with such Sunshine Laws. The form in which the Recipient provides any such information shall be mutually agreed but sufficient to enable BMS to comply with its reporting obligations and BMS may disclose any information that it believes is necessary to comply with Sunshine Laws. Without limiting the foregoing, BMS shall have the right to allocate POTVs in connection with this Agreement in any required reporting under Sunshine Laws in accordance with its normal business practices. These obligations shall survive the expiration

and termination of this Agreement to the extent necessary for BMS to comply with Sunshine Laws. The Recipient shall not be required to provide any information to BMS that is subject to disclosure pursuant to the Recipient's own obligations under the Sunshine Laws.

(c) For purposes of this Section 9.7, "***Sunshine Laws***" shall mean Applicable Laws requiring collection, reporting and disclosure of POTVs to certain healthcare providers, entities and individuals. These Applicable Laws may include relevant provisions of the Patient Protection and Affordable Health Care Act of 2010 and implementing regulations thereunder.

9.7 Destruction of Confidential Information. Upon expiration or termination of the Agreement, the receiving Party shall, upon request by the other Party, immediately destroy or return all of the other Party's Confidential Information relating solely to its Compound as monotherapy (but not to the Combined Therapy or the Combined Therapy Study Data) in its possession; *provided*, *however*, *that* the receiving Party shall be entitled to retain one (1) copy of Confidential Information solely for record-keeping

purposes and shall not be required to destroy any Confidential Information required, or reasonably necessary, to be retained for any clinical trial activities that continue after expiration or termination, or off-site computer files created during automatic system back up which are subsequently stored securely by the receiving Party.

9.8 Nonsolicitation of Employees. Each Party agrees that, during the [ ]* thereafter, neither it nor any of its Affiliates shall recruit, solicit or induce any employee of the other Party directly involved in the development or other activities conducted by the other Party under this Agreement to terminate his or her employment with such other Party and become employed by or consult for such other Party, whether or not such employee is a full-time employee of such other Party, and whether or not such employment is pursuant to a written agreement or is at-will. For purposes of the foregoing, "recruit", "solicit" or "induce" shall not be deemed to mean (a) circumstances where an employee of one Party initiates contact with the other Party or any of its Affiliates with regard to possible employment, or (b) general solicitations of employment not specifically targeted at employees of a Party or any of its Affiliates, including responses to general advertisements.

ARTICLE 10

REPRESENTATIONS AND WARRANTIES

10.1 Authority and Binding Agreement. Each Party represents and warrants to the other Party that (a) it has the corporate power and authority and the legal right to enter into this Agreement and perform its obligations hereunder, (b) it has taken all necessary corporate action on its part required to authorize the execution and delivery of the Agreement and the performance of its obligations hereunder, and (c) the Agreement has been duly executed and delivered on behalf of such Party and constitutes a legal, valid and binding obligation of such Party that is enforceable against it in accordance with its terms subject to bankruptcy, insolvency, reorganization, arrangement, winding-up, moratorium, and similar laws of general application affecting the enforcement of creditors' rights generally, and subject to general equitable principles, including the fact that the availability of equitable remedies, such as injunctive relief or specific performance, is in the discretion of the court.

10.2 No Conflicts. Each Party represents and warrants to the other Party that, to the best of its knowledge, it has not entered as of the Effective Date, and shall not enter, into any agreement with any Third Party that is in conflict with the rights granted to the other Party under this Agreement, and has not taken any action that would in any way prevent it from granting the rights granted to the other Party under this Agreement, or that would otherwise materially conflict with or adversely affect the rights granted to the other Party under this Agreement.

10.3 Litigation. Each Party represents and warrants to the other Party, to the best of its knowledge as of the Effective Date, it is not aware of any pending or threatened litigation (and has not received any communication) that alleges that its activities related to this Agreement have violated, or that by conducting the activities as contemplated in this Agreement it would violate, any of the intellectual property rights of any other Person (after giving effect to the license grants in this Agreement).

10.4 No Adverse Proceedings. Each Party represents and warrants to the other Party that, except as otherwise notified to the other Party, as of the Effective Date, there is not pending or, to the knowledge of such Party, threatened, against such Party, any claim, suit, action or governmental proceeding that would, if adversely determined, materially impair the ability of such Party to perform its obligations under this Agreement.

10.5 Consents. Each Party represents and warrants to the other Party that, to the best of its knowledge, all necessary consents, approvals and authorizations of all regulatory and governmental authorities and other Persons (a) required as of the Effective Date to be obtained by such Party in connection

with the execution and delivery of this Agreement have been obtained (or will have been obtained prior to such execution and delivery) and (b) required to be obtained by such Party in connection with the performance of its obligations under this Agreement have been obtained or will be obtained prior to such performance.

10.6 No Debarment. Each Party hereby certifies to the other that it has not used, and will not use the services of any person disqualified, debarred, banned, subject to debarment or convicted of a crime for which a person could be debarred by the FDA under 21 U.S.C. 335a, as amended (or subject to a similar sanction of any other Regulatory Authority), in any capacity in connection with any of the services or work provided under the Combined Therapy Clinical Trial and that this certification may be relied upon in any applications to the FDA or any other Regulatory Authority. It is understood and agreed that this certification imposes a continuing obligation upon each Party to notify the other promptly of any change in the truth of this certification. Upon request by a Party, the other Party agrees to provide a list of persons used to perform the services or work provided under any activities conducted for or on behalf of such Party or any of its Affiliates pursuant to this Agreement who, within the five (5) years preceding the Effective Date, or subsequent to the

Effective Date, were or are convicted of one of the criminal offenses required by 21 U.S.C. 335a, as amended, to be listed in any application for approval of an abbreviated application for drug approval.

10.7 Compliance with Applicable Law. Each Party represents and warrants to the other Party that it shall comply with all Applicable Law of the country or other jurisdiction, or any court or agency thereof, applicable to the performance of its activities hereunder or any obligation or transaction hereunder, including those pertaining to the production and handling of drug products, such as those set forth by the Regulatory Authorities, as applicable, and the applicable terms of this Agreement in the performance of its obligations hereunder.

10.8 Affiliates. Each Party represents and warrants to the other Party that, to the extent the intellectual property, Regulatory Documentation or Technology licensed by it hereunder are Controlled by its Affiliates or a Third Party, it has the right to use, and has the right to grant (sub)licenses to the other Party to use, such intellectual property, Regulatory Documentation or Technology in accordance with the terms of this Agreement.

10.9 Ethical Business Practices. Each Party represents and warrants to the other Party that neither it nor its Affiliates will make any payment, either directly or indirectly, of money or other assets, including the compensation such Party derives from this Agreement (collectively a "***Payment***"), to government or political party officials, officials of International Public Organizations, candidates for public office, or representatives of other businesses or persons acting on behalf of any of the foregoing (collectively "***Officials***") where such Payment would constitute violation of any law, including the Foreign Corrupt Practices Act of 1977, 15 U.S.C. §§ 78dd-1, et seq. In addition, regardless of legality, neither it nor its Affiliates will make any Payment either directly or indirectly to Officials if such Payment is for the purpose of improperly influencing decisions or actions with respect to the subject matter of this Agreement. All activities will be conducted in compliance with the U.S. False Claims Act and the U.S. Anti-Kickback Statute.

10.10 Accounting. Each Party represents and warrants to the other Party that all transactions under the Agreement shall be properly and accurately recorded in all material respects on its books and records and that each document upon which entries in such books and records are based is complete and accurate in all material respects.

10.11 Single Agent Compound Safety Issues. Each Party represents and warrants that, to the best of its knowledge as of the Effective Date, it is not aware of any material safety or toxicity issues with respect to its Single Agent Compound that are not reflected in the investigator's brochure for its Single Agent Compound existing as of the Effective Date.

10.12 Compliance with Licensor Agreements. Each Party will use, and will cause its Affiliates to use, Commercially Reasonable Efforts to comply with its obligations under any agreements entered into by it or its Affiliates with a Third Party under which it is licensed any intellectual property rights or confidential information relating to a Compound (and not to voluntarily terminate same) to the extent necessary for the Combined Therapy Clinical Trial to be conducted and completed in accordance with the terms of this Agreement and for the other Party to receive the rights and benefits provided to it under this Agreement.

10.13 DISCLAIMER OF WARRANTY. THE EXPRESS REPRESENTATIONS AND WARRANTIES STATED IN THIS ARTICLE 10 ARE IN LIEU OF, AND THE PARTIES DO HEREBY DISCLAIM, ALL OTHER REPRESENTATIONS AND WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, AND NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

ARTICLE 11

INDEMNIFICATION

11.1 BMS Indemnification. BMS hereby agrees to defend, hold harmless and indemnify (collectively, "***Indemnify***") the Recipient, its Affiliates, and its and their agents, directors, officers, employees and subcontractors (the "***Recipient Indemnitees***") from and against any and all liabilities, expenses and/or losses, including reasonable legal expenses and attorneys' fees (collectively "***Losses***") resulting from Third Party suits, claims, actions and demands (each, a "***Third Party Claim***") to the extent that they arise or result from (a) the negligence or intentional misconduct of any BMS Indemnitee or any (sub)licensee of BMS conducting activities on behalf of BMS under this Agreement, (b) any breach by BMS of any provision of this Agreement, (c) any injury (other than resulting from known adverse effects) to a subject in the Combined Therapy Clinical Trial to the extent caused by the BMS Study Drug, or (d) the use by BMS, its Affiliates, contractors or (sub)licensees of Combined Therapy Study Data, BMS Study Data, BMS Study Inventions, BMS Study Patent Rights, Combined Therapy Inventions and Combined Therapy Patent Rights (other than with respect to Third Party Claims that are covered under Section 6.4); but excluding, in each case ((a) through (d)), any such Losses to the extent arising or resulting from a cause or event for which the Recipient is obligated to Indemnify the BMS Indemnitees pursuant to Section 11.2.

11.2 Recipient Indemnification. The Recipient hereby agrees to Indemnify BMS, its Affiliates, and its and their agents, directors, officers, employees and subcontractors (the "***BMS Indemnitees***") from and against any and all Losses resulting from Third Party Claims to the extent that they arise or result from (a) the negligence or intentional misconduct of any Recipient Indemnitee or any (sub)licensee of the Recipient conducting activities on behalf of the Recipient under this Agreement, (b) any breach by the Recipient of any provision of this Agreement, (c) any injury to a subject in the Combined Therapy Clinical Trial not caused by the BMS Study Drug, or (d) the use by the Recipient, its Affiliates, contractors or (sub)licensees of Combined Therapy Study Data, Recipient Study Data, Recipient Study Inventions, Recipient Study Patent Rights, Combined Therapy Inventions and Combined Therapy Patent Rights (other than with respect to Third Party Claims that are covered under Section 6.4); but excluding, in each case ((a) through (d)), any such Losses to the extent arising or resulting from a cause or event for which BMS is obligated to Indemnify the Recipient Indemnitees pursuant to Section 11.1.

11.3 Indemnification Procedure. Each Party's agreement to Indemnify the other Party is conditioned on the performance of the following by the Party seeking indemnification: (a) providing written notice to the Indemnifying Party of any Loss and/or Third Party Claim of the types set forth in Section 11.1 and 11.2 promptly, and in any event within sixty (60) calendar days, after the Party seeking indemnification has knowledge of such Loss and/or Third Party Claim; *provided that*, any delay in complying with the

requirements of this clause (a) will only limit the Indemnifying Party's obligation to the extent of the prejudice caused to the Indemnifying Party by such delay, (b) permitting the Indemnifying Party to assume full responsibility to investigate, prepare for and defend against any such Loss and/or Third Party Claim, (c) providing reasonable assistance to the Indemnifying Party, at the Indemnifying Party's expense, in the investigation of, preparation for and defense of any Loss and/or Third Party Claim, and (d) not compromising or settling such Loss and/or Third Party Claim without the Indemnifying Party's written consent, such consent not to be unreasonably withheld or delayed.

11.4 Separate Defense of Claims. In the event that the Parties cannot agree as to the application of Sections 11.1 and/or 11.2 to any particular Loss, the Parties may conduct separate defenses of such Loss. Each Party further reserves the right to claim indemnity from the other in accordance with Sections 11.1 and/or 11.2 upon resolution of the underlying claim, notwithstanding the provisions of Section 11.3(b).

11.5 Insurance. Each Party shall maintain commercially reasonable levels of insurance or other adequate and commercially reasonable forms of protection or self-insurance to satisfy its indemnification obligations under this Agreement. Each Party shall provide the other Party with written notice at least thirty (30) calendar days prior to the cancellation, non-renewal or material change in such insurance or self-insurance which would materially adversely affect the rights of the other Party hereunder. The maintenance of any insurance shall not constitute any limit or restriction on damages available to a Party under this Agreement.

11.6 LIMITATION OF LIABILITY. NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY FOR INDIRECT, INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES, INCLUDING LOST PROFITS, ARISING FROM OR RELATING TO THIS AGREEMENT AND/OR SUCH PARTY'S PERFORMANCE HEREUNDER, REGARDLESS OF ANY NOTICE OF THE POSSIBILITY OF SUCH DAMAGES AND REGARDLESS OF THE CAUSE OF ACTION (WHETHER IN CONTRACT, TORT, BREACH OF WARRANTY OR OTHERWISE). NOTHING IN THIS SECTION 11.6 IS INTENDED TO LIMIT OR RESTRICT THE INDEMNIFICATION RIGHTS OR OBLIGATIONS OF A PARTY UNDER SECTIONS 11.1 OR 11.2 IN RELATION TO, OR DAMAGES AVAILABLE FOR, BREACHES OF CONFIDENTIALITY OBLIGATIONS IN ARTICLE 9 OR FOR A PARTY'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT.

ARTICLE 12

TERM AND TERMINATION

12.1 Term. This Agreement shall be effective as of the Effective Date and, unless earlier terminated pursuant to this Section 12.1, Sections 12.2, 12.3 or 12.4 or any other termination right expressly stated in this Agreement, shall continue in effect until completion of the Combined Therapy Clinical Trial by all centers participating in the Combined Therapy Clinical Trial, delivery of all Study Data, including all completed case report forms, all final analyses and all final clinical study reports contemplated by the Combined Therapy Clinical Trial to both Parties, and the completion of any statistical analyses and bioanalyses contemplated by the Protocol or otherwise agreed to by the Parties to be conducted under this Agreement (the "***Term***"). Notwithstanding the foregoing, either Party shall have the right to immediately terminate this Agreement if the Parties do not agree to a draft Protocol pursuant to Section 2.1(a) within [ ]* after the Effective Date on written notice to the other Party within [ ]* after the end of such [ ]* period; provided that Recipient shall reimburse BMS its cost of Manufacture and supply (including shipping, taxes and duty, if applicable) for any BMS Study Drug supplied to Recipient for the Combined Therapy Clinical Trial prior to such termination.

12.2 Termination for Material Breach.

(a) Notice and Cure Period. If a Party (the "***Breaching Party***") is in material breach of its obligations under this Agreement, the other Party (the "***Non-Breaching Party***") shall have the right to give the Breaching Party notice specifying the nature of such material breach. The Breaching Party shall have a period of [ ]* after receipt of such notice to cure such material breach (the "***Cure Period***") in a manner reasonably acceptable to the Non-Breaching Party. For the avoidance of doubt, this provision is not intended to restrict in any way either Party's right to notify the other Party of any other breach or to demand the cure of any other breach.

(b) Termination Right. The Non-Breaching Party shall have the right to terminate this Agreement, upon written notice, in the event that the Breaching Party has not cured such material breach within the Cure Period, *provided, however, that* if such breach is capable of cure but cannot be cured within the Cure Period, and the Breaching Party commences actions to cure such material breach within the Cure Period and thereafter diligently continue such actions, the Breaching Party shall have an additional [ ]* to cure such breach. If a Party contests such termination pursuant to the dispute resolution procedures under Section 13.3, such termination shall not be effective until a conclusion of the dispute resolution procedures in Section 13.3, as applicable, resulting in a determination that there has been a material breach that was not cured within the Cure Period (which Cure Period shall be tolled for the period from notice of such dispute until resolution of such dispute pursuant to Section 13.3 or abandonment of such dispute by the disputing Party).

12.3 Termination for Bankruptcy. Either Party may terminate this Agreement if, at any time, the other Party shall file in any court or agency pursuant to any statute or regulation of any state, country or jurisdiction, a petition in bankruptcy or insolvency or for reorganization or for an arrangement or for the appointment of a receiver or trustee of such other Party or of such other Party's assets, or if the other Party proposes a written agreement of composition or extension of its debts, or if the other Party shall be served with an involuntary petition against it, filed in any insolvency proceeding, and such petition shall not be dismissed or stayed within [ ]* after the filing thereof, or if the other Party will propose or be a party to any dissolution or liquidation, or if the other Party shall make an assignment for the benefit of its creditors.

12.4 Termination due to Material Safety Issue; Clinical Hold.

(a) Either Party shall have the right to terminate this Agreement immediately (after meeting and discussing with the other Party in good faith as described in the following sentence) upon written notice if it deems it necessary to protect the safety, health or welfare of subjects enrolled in the Combined Therapy Clinical Trial due to the existence of a Material Safety Issue. In the event of a termination due to a Material Safety Issue, prior to the

terminating Party providing written notice, each Party's safety committee shall, to the extent practicable, meet and discuss in good faith the safety concerns raised by the terminating Party and consider in good faith the input, questions and advice of the non-terminating Party, but should any dispute arise in such discussion, the dispute resolution processes set forth in Section 13.3 shall not apply to such dispute and the terminating Party shall have the right to issue such notice and such termination shall take effect without the Parties first following the procedures set forth in Section 13.3.

(b) If a Clinical Hold with respect to either the BMS Study Drug or the Recipient Study Drug should arise at any time after the Effective Date, the Parties will meet and discuss the basis for the Clinical Hold, how long the Clinical Hold is expected to last, and how they might address the issue that caused the clinical hold. If, after [ ]* of discussions following the Clinical Hold, either Party reasonably concludes that the issue adversely impacts the Combined Therapy Clinical Trial and is not solvable or that unacceptable and material additional costs/delays have been and/or will continue to be incurred in the conduct of the Combined Therapy Clinical Trial, then such Party may immediately terminate this Agreement.

12.5 Effect of Termination. Upon expiration or termination of this Agreement, (a) the licenses granted to the Recipient to conduct the Combined Therapy Clinical Trial in Section 3.1 (and any sublicenses granted under Section 3.2) shall terminate, and (b) the Parties shall use reasonable efforts to wind down activities under this Agreement in a reasonable manner and avoid incurring any additional expenditures or non-cancellable obligations; *provided that*, in the case of termination pursuant to Section 12.4, the Recipient may continue to dose subjects enrolled in the Combined Therapy Clinical Trial through completion of the Protocol if dosing is required by the applicable Regulatory Authority(ies) and/or Applicable Law. Any such wind-down activities will include the return to BMS, or destruction, of all BMS Study Drug provided to the Recipient and not consumed in the Combined Therapy Clinical Trial, except in the event that the Recipient terminates this Agreement pursuant to Section 12.2 or 12.3, in which case the Recipient shall continue to have the right to use any BMS Study Drug provided to Recipient for the conduct of the Combined Therapy Clinical Trial.

12.6 Survival. The following Articles and Sections of this Agreement and all definitions relating thereto shall survive any expiration or termination of this Agreement for any reason: Section 2.1(b), Section 2.4, Section 4.5, Sections 5.1(e)-(h), Section 5.1(j), Section 5.1(k), Section 5.1(o), Article 6 ("*Intellectual Property*"), Article 7 ("*Costs and Expenses)*, Article 8 ("*Records and Study Data*"), Article 9 ("*Confidentiality*"); Article 10 ("*Representations and Warranties*"), Article 11 ("*Indemnification*"), Section 12.5 ("*Effect of Termination*"), Section 12.6 ("*Survival*"), Section 13.1 ("*Entire Agreement*"), Section 13.2 ("*Governing Law*"), Section 13.3 ("*Dispute Resolution*"), Section 13.4 ("*Injunctive Relief*"), Section 13.6 ("*Notices*"), Section 13.7 ("*No Waiver, Modifications*"), Section 13.8 ("*No Strict Construction*"), Section 13.9 ("*Independent Contractor*"), Section 13.10 ("*Assignment, Licenses*"), Section 13.11 ("*Headings*"), Section 13.13 ("*Severability*"), Section 13.15 ("*No Benefit to Third Parties*"), and Section 13.16 ("*Construction*").

ARTICLE 13

MISCELLANEOUS

13.1 Entire Agreement. The Parties acknowledge that this Agreement shall govern all activities of the Parties with respect to the Combined Therapy Clinical Trial from the Effective Date forward. This Agreement, including the Exhibits hereto and together with the Supply and Quality Documentation, sets forth the complete, final and exclusive agreement between the Parties concerning the subject matter hereof and supersedes all prior agreements and understandings between the Parties with respect to such subject matter. There are no covenants, promises, agreements, warranties, representations, conditions or understandings, either oral or written, between the Parties with respect to such subject matter other than as are set forth in this Agreement. All Exhibits attached hereto are incorporated herein as part of this Agreement.

13.2 Governing Law. This Agreement shall be governed and construed in accordance with the internal laws of the State of Delaware, USA, excluding any choice of law rules that may direct the application of the laws of another jurisdiction.

13.3 Dispute Resolution.

(a) The Parties' Designated Clinical Contacts (for clinical and regulatory matters) and the Parties Designated Supply Contacts (for supply matters) shall attempt in good faith to resolve any dispute or concern that either Party may bring to the other Party's attention.

(b) In the event of any dispute, controversy or claim arising out of, relating to or in connection with any provision of this Agreement (each a "***Dispute***"), other than a Publication Dispute or a dispute as to whether a Material Safety Issue exists, that cannot be resolved by the applicable Designated

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Contacts of each Party after a period of [ ]*, then upon the request of either Party by written notice, the Parties shall refer such Dispute to the Executive Officers. This Agreement shall remain in effect during the pendency of any such dispute. In the event that no resolution is made by the Executive Officers (or their designee) in good faith negotiations within [ ]* after such referral to them, then:

(i) if such Dispute constitutes an Arbitration Matter, such Dispute shall be resolved through arbitration in accordance with the remainder of this Section 13.3; *provided*, *however*, *that* with respect to any such Arbitration Matter Dispute that relates to a matter described in Section 13.4, either Party shall have the right to seek an injunction or other equitable relief without waiting for the expiration of such [ ]* -period;

(ii) if such Dispute constitutes a Publication Dispute, the specific dispute resolution processes contained in Section 9.6(b) will apply;

(iii) if such Dispute regards the supply, quality or compliance with specifications of the Recipient Study Drug, the Recipient shall have the final say regarding such Dispute; *provided that* (A) the Recipient shall have no authority to amend, change or waive compliance with this

Agreement, which matters may be approved only by the written consent of both Parties, (B) all determinations made by the Recipient shall be consistent with the terms of this Agreement;

(iv) if such Dispute regards the supply, quality or compliance with specifications of the BMS Study Drug, BMS shall have the final say regarding such Dispute; *provided that* (A) BMS shall have no authority to amend, change or waive compliance with this Agreement, which matters may be approved only by the written consent of both Parties, (B) all determinations made by BMS shall be consistent with the terms of this Agreement.

If a Dispute that constitutes an Arbitration Matter remains unresolved after escalation to the Executive Officers as described above, either Party may refer such matter to arbitration as described herein. Any arbitration of an Arbitration Matter under this Agreement shall be shall be conducted under the auspices of the American Arbitration Association by a panel of three (3) arbitrators pursuant to that organization's Commercial Arbitration Rules then in effect.

(c) The fees and expenses of the arbitrators shall be borne in equal shares by the Parties. Each Party shall bear the fees and expenses of its legal representation in the arbitration. The arbitral tribunal shall not reallocate either the fees and expenses of the arbitrators or of the Parties' legal representation. The arbitration shall be held in New York, New York, which shall be the seat of the arbitration. The language of the arbitration shall be English.

13.4 Injunctive Relief. Notwithstanding anything herein to the contrary, a Party may seek an injunction or other injunctive relief from any court of competent jurisdiction in order to prevent immediate and irreparable injury, loss or damage on a provisional basis. For the avoidance of doubt, if either Party (a) discloses Confidential Information of the other Party other than as permitted under Article 9, (b) uses (in the case of the Recipient) the BMS Study Drug or BMS Technology or (in the case of BMS) the Recipient Study Drug or Recipient Technology in any manner other than as expressly permitted under this Agreement or (c) otherwise is in material breach of this Agreement and such material breach could cause immediate harm to the value of the Recipient Study Drug (by the Recipient) or the BMS Study Drug (by BMS), the other Party shall have the right to seek an injunction or other equitable relief precluding the other Party from continuing its activities related to the Combined Therapy Clinical Trial without waiting for the conclusion of the dispute resolution procedures under Section 13.3.

13.5 Force Majeure. The Parties shall be excused from the performance of their obligations under this Agreement (other than the payment of monies owed to the other Party) to the extent that such

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performance is prevented by force majeure and the non-performing Party promptly provides notice of the prevention to the other Party. Such excuse shall be continued so long as the condition constituting force majeure continues and the nonperforming Party takes reasonable efforts to remove the condition. For purposes of this Agreement, force majeure shall mean acts of God, strikes or other concerted acts of workers, civil disturbances, fires, earthquakes, acts of terrorism, floods, explosions, riots, war, rebellion, sabotage or failure or default of public utilities or common carriers or similar conditions beyond the control of the Parties.

13.6 Notices. Any notice required or permitted to be given under this Agreement shall be in writing, shall specifically refer to this Agreement and shall be deemed to have been sufficiently given for all purposes if such notice is timely and is: (a) mailed by first class certified or registered mail, postage prepaid, return receipt requested, (b) sent by express delivery service, or (c) personally delivered. Unless otherwise specified in writing, the mailing addresses of the Parties shall be as described below.

For the Recipient:	Replimune Inc. 18 Commerce Way Wolburn, MA 10801 Attention: Rob Coffin, CEO
For BMS:	Bristol-Myers Squibb Company Route 206 and Province Line Road Princeton, NJ 08543-4000 Attention: VP, Business Development
With a copy to:	Bristol-Myers Squibb Company Route 206 and Province Line Road Princeton, NJ 08543-4000 Attention: VP & Assistant General Counsel, Licensing and Business Development

Any such communication shall be deemed to have been received when delivered. It is understood and agreed that this Section 13.6 is not intended to govern the day-to-day business communications necessary between the Parties in performing their duties, in due course, under the terms of this Agreement.

13.7 No Waiver; Modifications. It is agreed that no waiver by a Party hereto of any breach or default of any of the covenants or agreements herein set forth shall be deemed a waiver as to any subsequent and/or similar breach or default. No amendment, modification, release or discharge shall be binding upon the Parties unless in writing and duly executed by authorized representatives of both Parties.

13.8 No Strict Construction. This Agreement has been prepared jointly and shall not be strictly construed against either Party. No presumption as to construction of this Agreement shall apply against either Party with respect to any ambiguity in the wording of any provision(s) of this Agreement irrespective of which Party may be deemed to have authored the ambiguous provision(s).

13.9 Independent Contractor. The Parties are independent contractors of each other, and the relationship between the Parties shall not constitute a partnership, joint venture or agency. Neither Party shall be the agent of the other or have any authority to act for, or on behalf of, the other Party in any matter.

13.10 Assignment; Licensees.

(a) Assignment. Neither Party may assign or transfer this Agreement or any rights or obligations hereunder without the prior written consent of the other Party, *except* that a Party may make such an assignment without the other Party's consent (i) to an Affiliate, (ii) to a Third Party that merges

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with, consolidates with or acquires substantially all of the assets or voting control of the assigning Party or (iii) to a Third Party that acquires all the rights of the assigning Party to the Recipient Study Drug, in the case of the Recipient, or the BMS Study Drug, in the case of BMS. If assigned or transferred to an Affiliate, the assigning/transferring Party shall remain jointly and severally responsible and liable with the assignee/transferee Affiliate for the assigned rights and/or obligations. If assigned to a Third Party, any permitted successor or assignee of rights and/or obligations hereunder shall, in a writing to the other Party, expressly assume performance of such rights and/or obligations. Any assignment or attempted assignment by any Party in violation of the terms of this Section 13.10(a) shall be null and void and of no legal effect.

(b) Licensees. If a Party grants a third party a license (other than a license solely to make a product for a Party and other than any license rights granted to Ono for the Ono Territory) to develop and commercialize its Single Agent Compound on a worldwide basis or in any geographic region and/or for all purposes or a limited field, (a "***Licensee***"), such Party will obtain the Licensee's agreement to abide by the terms of this Agreement as and to the extent necessary in order for its obligations hereunder to be fulfilled in the same manner as the licensing Party; and in such event the licensing Party may exercise its rights granted hereunder (including rights to use Study Data and practice Inventions) through the Licensee.

13.11 Headings. The captions to the several Sections and Articles hereof are not a part of this Agreement, but are included merely for convenience of reference only and shall not affect its meaning or interpretation.

13.12 Counterparts. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one (1) and the same instrument. This Agreement may be executed by facsimile or electronic (e.g., pdf) signatures and such signatures shall be deemed to bind each Party hereto as if they were original signature.

13.13 Severability. If any provision of this Agreement is held to be illegal, invalid or unenforceable under any present or future law, and if the rights or obligations of a Party under this Agreement will not be materially and adversely affected thereby, (a) such provision shall be fully severable, (b) this Agreement shall be construed and enforced as if such illegal, invalid or unenforceable provision had never comprised a part hereof, (c) the remaining provisions of this Agreement shall remain in full force and effect and shall not be affected by the illegal, invalid or unenforceable provision or by its severance herefrom and (d) in lieu of such illegal, invalid or unenforceable provision, there shall be added automatically as a part of this Agreement a legal, valid and enforceable provision as similar in terms to such illegal, invalid or unenforceable provision as may be possible and reasonably acceptable to the Parties.

13.14 Further Assurance. Each Party shall duly execute and deliver, or cause to be duly executed and delivered, such further instruments and do and cause to be done such further acts and things, including the filing of such assignments, agreements, documents and instruments, as may be necessary or as the other Party may reasonably request in order to perfect any license, assignment or other transfer or any properties or rights under, or pursuant, to this Agreement.

13.15 No Benefit to Third Parties. The representations, warranties and agreements set forth in this Agreement are for the sole benefit of the Parties and their successors and permitted assigns, and they shall not be construed as conferring any rights on any other parties.

13.16 Construction.

(a) General. Except as otherwise explicitly specified to the contrary, (i) references to a Section, Article or Exhibit means a Section or Article of, or Exhibit to, this Agreement and all subsections thereof, unless another agreement is specified, (ii) references to a particular statute or regulation include all rules and regulations promulgated thereunder and any successor statute, rules or regulations then in effect, in each case including the then-current amendments thereto, (iii) words in the singular or plural

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form include the plural and singular form, respectively, (iv) the terms "including," "include(s)," "such as," and "for example" used in this Agreement mean including the generality of any description preceding such term and will be deemed to be followed by "without limitation", and (v) the words "hereof," "herein," "hereunder," "hereby" and derivative or similar words refer to this Agreement. No presumption as to construction of this Agreement shall apply against either Party with respect to any ambiguity in the wording of any provision(s) of this Agreement irrespective of which Party may be deemed to have authored the ambiguous provision(s).

(b) No Response. Except as expressly set forth in this Agreement, where a provision of this Agreement provides for a Party to respond within a designated period following written notice from the other Party, and if such Party fails to respond, then the failure to respond shall not be deemed to create or imply: (i) that the non-responding Party agrees or disagrees with the proposed action to be taken by the other Party, (ii) any amendment, change or waiver of the terms of this Agreement, or (iii) any consent that an action proposed to be taken may be taken if it conflicts with the terms of this Agreement and/or waiver of any rights it may have to seek remedies at law or in equity for breach of this Agreement as a result of the action taken.

[*Signature page follows*]

IN WITNESS WHEREOF, the Parties, intending to be legally bound hereby, have caused this Agreement to be executed by their duly authorized representatives as of the Effective Date.

Replimune Inc.		**Bristol-Myers Squibb Company**	
By:	/s/ Robert Coffin	By:	/s/ Fouad Namouni
Name:	Robert Coffin	Name:	Dr. Fouad Namouni, MD
Title:	CEO	Title:	Head of Oncology Development
Date:	21st February 2018	Date:	February 26, 2018

APPENDIX A

DRAFT PROTOCOL SUMMARY

[ ]*

EXHIBIT 10.13

REPLIMUNE GROUP, INC. REQUESTS THAT THE MARKED PORTIONS OF THIS EXHIBIT BE GRANTED CONFIDENTIAL TREATMENT UNDER RULE 24B-2 OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

EXECUTION VERSION

MASTER CLINICAL TRIAL COLLABORATION AND SUPPLY AGREEMENT

This MASTER CLINICAL TRIAL COLLABORATION AND SUPPLY AGREEMENT (this "**Agreement**"), made as of May 29, 2018 (the "**Effective Date**"), is by and between Regeneron Pharmaceuticals, Inc., having a place of business at 777 Old Saw Mill River Road, Tarrytown, NY 10591 ("**Regeneron**"), and Replimune Group Inc. having a place of business at 18 Commerce Way, Woburn MA 01801 ("**Replimune**"). Regeneron and Replimune are each referred to herein individually as a "**Party**" and collectively as the "**Parties**".

RECITALS

A. Regeneron holds intellectual property rights with respect to the Regeneron Compound (as defined below).

B. Replimune holds intellectual property with respect to the Replimune Compound (as defined below).

C. Replimune is developing the Replimune Compound for the treatment of certain tumor types.

D. Regeneron is developing the Regeneron Compound for the treatment of certain tumor types.

F. The Parties now wish to undertake one or more Combination Clinical Trials (as defined below) in which the Replimune Compound and the Regeneron Compound would be dosed concurrently or in combination to treat various types of cancer (each, a "**Study**", as defined below). For each such Study, the Parties are to complete and enter into a Study Plan (as defined below), which, among other items, identifies the Party that is the Sponsoring Party for such Study and includes the Protocol, Budget, Sample Testing and Clinical Obligations Schedule (each as defined below) for such Study.

G. Regeneron and Replimune, consistent with the terms of this Agreement, desire to collaborate as more fully described herein, including by providing the Regeneron Compound and the Replimune Compound for each Study.

NOW, THEREFORE, in consideration of the premises and of the following mutual promises, covenants and conditions, the Parties, intending to be legally bound, mutually agree as follows:

CONFIDENTIAL

*CONFIDENTIAL TREATMENT REQUESTED.

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1. Definitions.

For all purposes of this Agreement, the capitalized terms defined in this Article 1 and throughout this Agreement shall have the meanings herein specified.

1.1 "**Affiliate**" means, with respect to either Party, a firm, corporation or other entity which directly or indirectly owns or controls said Party, or is owned or controlled by said Party, or is under common ownership or control with said Party. The word "**control**" means (i) the direct or indirect ownership of fifty percent (50%) or more of the outstanding voting securities of a legal entity, or (ii) possession, directly or indirectly, of the power to direct the management or policies of a legal entity, whether through the ownership of voting securities, contract rights, voting rights, corporate governance or otherwise.

1.2 "**Agreement**" means this agreement, as amended by the Parties from time to time, and as set forth in the preamble.

1.3 "**Applicable Law**" means all federal, state, local, national and regional statutes, laws, rules, regulations and directives applicable to a particular activity hereunder, including performance of clinical trials, medical treatment and the processing and protection of personal and medical data, that may be in effect from time to time, including those promulgated by the United States Food and Drug Administration ("**FDA**"), the European Medicines Agency ("**EMA**") and any successor agency to the FDA or EMA or any agency or authority performing some or all of the functions of the FDA or EMA in any jurisdiction outside the United States or the European Union (each a "**Regulatory Authority**" and collectively, "**Regulatory Authorities**"), and including without limitation cGMP and GCP (each as defined below); all data protection requirements such as those specified in the EU Data Protection Directive and the regulations issued under the United States Health Insurance Portability and Accountability Act of 1996 ("**HIPAA**"); export control and economic sanctions regulations which prohibit the shipment of United States-origin products and technology to certain restricted countries, entities and individuals; anti-bribery and anti-corruption laws pertaining to interactions with government agents, officials and representatives; laws and regulations governing payments to healthcare providers; and any United States or other country's or jurisdiction's successor or replacement statutes, laws, rules, regulations and directives relating to the foregoing.

1.4 "**Audit Arbitrator**" has the meaning set forth in Section 7.3.3.

1.5 "**Budget**" has the meaning set forth in Section 7.1.

1.6 "**Business Day**" means any day other than a Saturday, Sunday or any public holiday in the country where the applicable obligations are to be performed.

1.7 "**Calendar Quarter**" means a three-month period beginning on January, April, July or October 1st.

1.8 "**Calendar Year**" means a one-year period beginning on January 1st and ending on December 31st.

1.9 "**cGMP**" means the current Good Manufacturing Practices officially published and interpreted by EMA, FDA and other applicable Regulatory Authorities that may be in effect from time to time and are applicable to the Manufacture of the Compounds.

1.10 "**Change of Control**" means with respect to a Party: (1) the sale of all or substantially all of such Party's assets or business relating to this Agreement; (2) a merger, reorganization or consolidation involving a Party in which the voting securities of such Party outstanding immediately prior thereto cease to represent at least fifty percent (50%) of the combined voting power of the surviving entity immediately after such merger, reorganization or consolidation; or (3) a person or entity, or group of persons or entities, acting in concert acquire more than fifty percent (50%) of the voting equity securities or management control of the Party.

1.11 "**Clinical Data**" means, for each Study, the data and results generated under such Study, including such Study's Sample Testing Results.

1.12 "**Clinical Supply Quality Agreement**" means a Clinical Supply Quality Agreement the Parties agree to enter into for a particular Study.

1.13 "**Clinical Obligations Schedule**" means, for each Study, the schedule attached to the Study Plan for such Study setting forth the obligations of the Parties in connection with the conduct of the applicable Study.

1.14 "**Collaboration Know-How**" has the meaning set forth in Section 10.1.1.

1.15 "**Combination**" means the use or method of using the Replimune Compound and the Regeneron Compound in concomitant or sequential administration.

1.16 **"Combination Clinical Trial"** means a clinical trial to be conducted under this Agreement for the Combination.

1.17 **"Competitive Study"** has the meaning set forth in Section 2.7.

1.18 "**Compounds**" means the Replimune Compound and the Regeneron Compound. A "**Compound**" means either the Replimune Compound or the Regeneron Compound, as applicable.

1.19 "**Confidential Information**" means any information, Know-How or other proprietary information or materials furnished to one Party by the other Party in connection with this Agreement or a Study Plan, except to the extent that it can be established by the receiving Party that such information or materials: (a) were already known to the receiving Party, other than under an obligation of confidentiality, at the time of disclosure by the disclosing Party as demonstrated by competent business records; (b) were generally available to the public or otherwise part of the public domain at the time of its disclosure to the receiving Party; (c) became generally available to the public or otherwise part of the public domain after their disclosure and other than through any act or omission of the receiving Party in breach of this Agreement; (d) were disclosed to the receiving Party by a Third Party who had no obligation to the disclosing Party not to disclose such information to others; or (e) were subsequently developed by the

receiving Party without use of or reference to the Confidential Information as demonstrated by competent business records.

1.20 "**Continuing Party**" has the meaning set forth in Section 10.1.2.

1.21 "**CTA**" means an application to a Regulatory Authority for purposes of requesting the ability to start or continue a clinical trial.

1.22 "**Development Costs**" means, [ ]*, in each case, that are incurred as an expense in accordance with such Party's accounting standards (consistently applied) and consistent with the applicable Study Plan and Budget for such Study; provided that in all cases, Development Costs [ ]*. For clarity, Development Costs will be calculated separately for each Study.

1.23 "**Development FTE Cost**" means, for a given period, the Development FTE Rate multiplied by the number of FTEs in such period utilized in connection with a Study (and other activities related thereto as set forth in the Study Plan, including regulatory activities).

1.24 "**Development FTE Rate**" means a rate of [ ]*; provided that, starting January 1, 2019, [ ]* (as of January 1 of a given Calendar Year).

1.25 "**Disposition Package**" has the meaning set forth in Section 8.7.1.

1.26 "**Dispute**" has the meaning set forth in Section 21.1.

1.27 "**Effective Date**" has the meaning set forth in the preamble.

1.28 "**EMA**" has the meaning set forth in the definition of Applicable Law.

1.29 [ ]*

1.30 "**Final Study Report**" means, for each Study, the final written report on the results of such Study as prepared by the Responsible Party for such Study.

1.31 "**First Site Ready**" means, for a Study, the date on which the first clinical site has all deliverables in place to support patient enrollment in such Study.

1.32 "**FDA**" has the meaning set forth in the definition of Applicable Law.

1.33 "**FTE**" means [ ]* devoted to or in support of the conduct of a Study under a Study Plan and that is carried out by one or more employees of Replimune or Regeneron (or their respective Affiliates), as applicable, or any prorated portion thereof.

1.34 "**GCP**" means the Good Clinical Practices officially published by EMA, FDA and the International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH) that may be in effect from time to time and are applicable to the testing of the Compounds.

1.35 "**Government Official**" means: (a) any officer or employee of a government or any department, agency or instrument of a government; (b) any person acting in an official capacity for or on behalf of a government or any department, agency, or instrument of a government; (c) any officer or employee of a company or business owned in whole or part by a government; (d) any officer or employee of a public international organization such as the World Bank or United Nations; (e) any officer or employee of a political party or any person acting in an official capacity on behalf of a political party; and/or (f) any candidate for political office; who, when such Government Official is acting in an official capacity, or in an official decision-making role, has responsibility for performing regulatory inspections, government authorizations or licenses, or otherwise has the capacity to take decisions with the potential to affect the business of either of the Parties.

1.36 "**HIPAA**" has the meaning set forth in the definition of Applicable Law.

1.37 "**IND**" means the Investigational New Drug Application filed or to be filed with the FDA as described in Title 21 of the U.S. Code of Federal Regulations, Part 312, and the equivalent application in the jurisdictions outside the United States, including an "Investigational Medicinal Product Dossier" filed or to be filed with the EMA.

1.38 "**Inventions**" means all inventions and discoveries that are made or conceived in the performance of a Study.

1.39 "**Jointly Owned Invention**" has the meaning set forth in Section 10.1.1.

1.40 "**Joint Patent Application**" has the meaning set forth in Section 10.1.2.

1.41 "**Joint Patent**" means a patent that issues from a Joint Patent Application.

1.42 "**Know-How**" means any proprietary invention, innovation, improvement, development, discovery, computer program, device, trade secret, method, know-how, process, technique or the like, including manufacturing, use, process, structural, operational and other data and information, whether or not written or otherwise fixed in any form or medium, regardless of the media on which contained and whether or not patentable or copyrightable, that is not generally known or otherwise in the public domain.

1.43 "**Liability**" has the meaning set forth in Section 14.2.1.

1.44 "**Manufacture**," "**Manufactured**," or "**Manufacturing**" means all stages of the manufacture of a Compound, including planning, purchasing, manufacture, processing, compounding, storage, filling, packaging, waste disposal, labeling, leafleting, testing, quality assurance, sample retention, stability testing, release, dispatch and supply, as applicable.

1.45 "**Manufacturer's Release**" or "**Release**" has the meaning ascribed to such term in the Clinical Supply Quality Agreement.

1.46 "**Manufacturing Site**" means the facilities where a Compound is Manufactured by or on behalf of a Party, as such Manufacturing Site may change from time to time in accordance with Section 8.6.

1.47 "**Non-Conformance**" means, with respect to a given unit of Compound, an event that deviates from (i) the approved Specifications for such Compound; (ii) the applicable Clinical Supply Quality Agreement; and (iii) all Applicable Law, including cGMP and health, safety and environmental protections.

1.48 "**Non-filing Party**" has the meaning set forth in Section 10.1.2.

1.49 "**Non-Responsible Party**" means, with respect to a right or obligation under this Agreement, including any Study Plan, the Party that is not the Responsible Party with respect to such right or obligation.

1.50 "**Non-Sponsor Party**" means, for each Study, the Party that is not the Sponsor of such Study.

1.51 "**Oncolytic Virus**" means [ ]*

1.52 "**Opting-Out Party**" has the meaning set forth in Section 10.1.2.

1.53 "**Other Party's Compound**" means, with respect to Replimune, the Regeneron Compound, and with respect to Regeneron, the Replimune Compound.

1.54 "**Party**" has the meaning set forth in the preamble.

1.55 "**PD-1 Antagonist**" means [ ]*

1.56 "**Pharmacovigilance Agreement**" means a pharmacovigilance agreement the Parties agree to enter into to cover a particular Study.

1.57 "**Protocol**" means, for each Study, the written documentation that describes such Study and sets forth specific activities to be performed as part of the conduct of such Study. The final Protocol shall be agreed as set forth in Section 4.1.

1.58 "**Regeneron Compound**" means [ ]* that targets [ ]* and is formulated for IV administration. For the purposes of Sections 2.3, 2.5, 3.3 and Article 8, reference to the Regeneron Compound shall also include any [ ]*.

1.59 "**Regeneron Compound Specific Clinical Data**" has the meaning set forth in Section 3.7.

1.60 "**Regulatory Approvals**" means, with respect to a compound and a country, any and all permissions (other than the Manufacturing approvals) required to be obtained from Regulatory Authorities and any other competent authority for the development, registration,

importation, use (including use in clinical trials), distribution, sale and marketing of such compound in such country, including any pricing or reimbursement approvals.

1.61 "**Regulatory Authorities**" has the meaning set forth in the definition of Applicable Law.

1.62 **"Replimune Compound"** means any of Replimune's proprietary oncolytic viruses. For the purposes of Sections 2.3, 2.5, 3.3 and Article 8, reference to the Replimune Compound shall also include any RP-1 placebo that is part of any Study.

1.63 "**Replimune Compound Specific Clinical Data**" has the meaning set forth in Section 3.7.

1.64 "**Responsible Party**" means, for each Study, that Party expressly designated in Articles 1 through 25 of this Agreement or in the applicable Study Plan for such Study as the responsible party with respect to a particular activity or obligation in connection with the conduct of such Study. Unless explicitly stated otherwise in this Agreement or in the applicable Study Plan, the Responsible Party shall be the Sponsoring Party.

1.65 "**Samples**" means, for each Study, the samples described in the applicable Study Plan for such Study.

1.66 "**Sample Testing**" means, for each Study, the studies to be performed by each Party using the applicable Samples for such Study as set forth in the applicable Study Plan.

1.67 "**Sample Testing Results**" means, for each Study, those results arising from the Sample Testing that are to be shared between Regeneron and Replimune, as set forth in the applicable Study Plan for such Study.

1.68 "**Specifications**" means, with respect to a Compound to be used in a Study, the set of requirements for such Compound as set forth in the Clinical Supply Quality Agreement covering such Study.

1.69 "**Sponsoring Party**" means, for each Study, the sponsor of such Study as the term "sponsor" is defined in Title 21 C.F.R. Part 312.3(b). Each Study Plan for a Study will expressly state which of the Parties shall be the Sponsoring Party for such Study.

1.70 "**Study**" means each clinical trial to be conducted under this Agreement pursuant to an executed Study Plan for the concomitant or sequenced administration of the Regeneron Compound and the Replimune Compound as outlined in the Protocol that is attached to the applicable Study Plan, which Protocol may be amended by the JDC in accordance with Section 4.1. Each Study will be a Combination Clinical Trial in subjects with the tumor type identified in the applicable Study Plan.

1.71 "**Study Completion**" has the meaning set forth in Section 3.9.

1.72 "**Study Effective Date**" means the effective date of the applicable Study Plan as set forth on such Study Plan.

1.73 "**Study Plan**" means, for each Study, the plan substantially in the form of Appendix A, including all Exhibits thereto, that is completed and entered into by the Parties for such Study as further described in Section 2.1.

1.74 "[ ]*" has the meaning [ ]*.

1.75 "**Taxes**" has the meaning set forth in [ ]*.

1.76 "**Toxicity and Safety Data**" means all clinical adverse event information and/or patient-related safety data, as more fully described in the Pharmacovigilance Agreement.

1.77 "**Third Party**" means any person or entity other than Replimune, Regeneron or their respective Affiliates.

2. Scope of the Agreement.

2.1 The Parties intend to undertake one or more Studies under this Agreement to evaluate the Combination in subjects with certain cancer or tumor types. Prior to the commencement of each Study, the Parties shall complete and enter into a Study Plan for such Study substantially in the form of Appendix A. The Study Plan for each Study shall be sequentially numbered and shall set forth: (a) the Sponsoring Party for such Study; (b) the Project Manager for each Party; (c) the Protocol for such Study, or a Protocol synopsis if the final Protocol has not been agreed to by the Parties prior to the Study Effective Date; (d) a schedule setting forth the quantities and timelines for the supply of each Party's Compound for such Study as further described in Article 8; (e) the applicable Samples to be obtained and Sample Testing for such Study; (f) the Clinical Obligations Schedule for such Study; (g) the budget and cost-sharing arrangement for such Study, if applicable, as further described in Section 4.1; (h) the Study Effective Date for such Study Plan; and (i) any mutually agreed upon deviations from the terms of this Agreement, or additional terms that are necessary for the performance of such Study by the Parties as determined by the JDC. Each Study Plan shall come into full force and effect upon execution and delivery thereof by both of the Parties. Neither Party shall have any obligation to enter into any Study Plan. In the event of conflict between the terms described in Articles 1 through 25 of this Agreement and the terms of any Study Plan, the terms of Articles 1 through 25 of this Agreement shall govern and control unless otherwise explicitly stated as an intended change from Articles 1 through 25 of this Agreement in such Study Plan.

2.2 Each Party shall contribute to each Study such resources as are necessary to fulfill its obligations as set forth in this Agreement or any Study Plan.

2.3 Each Party shall grant and hereby grants the other Party a non-exclusive license under its intellectual property and the intellectual property of its Affiliates, for the sole purpose of the other Party's performance of activities under an in accordance with the relevant Study Plan.

2.4 Each Party agrees to act in good faith in performing its obligations under this Agreement and shall notify the other Party as promptly as possible in the event of any Manufacturing or other delay that is likely to adversely affect supply of its Compound or timely performance of its obligations as contemplated by this Agreement or any Study Plan.

2.5 Replimune agrees to Manufacture and supply the Replimune Compound for purposes of each Study as set forth in Article 8, and Replimune hereby represents and warrants to Regeneron that, at the time of Delivery of the Replimune Compound, such Replimune Compound shall have been Manufactured and supplied in compliance with: (i) the Specifications for the Replimune Compound; (ii) the applicable Clinical Supply Quality Agreement; and (iii) all Applicable Law, including cGMP and health, safety and environmental protections. Regeneron agrees to Manufacture and supply the Regeneron Compound for purposes of each Study as set forth in Article 8, and Regeneron hereby represents and warrants to Replimune that, at the time of Delivery of the Regeneron Compound, such Regeneron Compound shall have been Manufactured and supplied in compliance with: (a) the Specifications for the Regeneron Compound; (b) the Clinical Supply Quality Agreement; and (c) all Applicable Law, including cGMP and health, safety and environmental protections. Without limiting the foregoing, each Party is responsible for obtaining all regulatory approvals (including facility licenses) that are required to Manufacture its Compound in accordance with Applicable Law (provided that for clarity, the Sponsoring Party shall be responsible for obtaining Regulatory Approvals for each Study as set forth in Section 3.5).

2.6 Each Party shall have the right to subcontract any portion of its obligations hereunder to subcontractors, provided that the subcontracting Party shall consult with the JDC regarding the use of such Third Parties in the performance of such obligations (but for clarity, shall not have the right to approve such Third Parties), and further provided that such Party shall remain solely and fully liable for the performance of such subcontractors. Each Party shall ensure that each of its subcontractors performs its obligations pursuant to the terms of this Agreement, including the Appendices attached hereto. Each Party shall use reasonable efforts to obtain and maintain copies of documents relating to the obligations performed by such subcontractors that are held by or under the control of such subcontractors and that are required to be provided to the other Party under this Agreement. The non-Sponsoring Party, through the JDC shall have the right to review and comment on (but for clarity, shall not have the right to approve) the site template used by the Sponsoring Party or any clinical research organization used by the Sponsoring Party for the Study.

2.7 Third Party Collaborations and Time Limited ROFN.

(a) With respect to (i) the first Study which is agreed to be in Cutaneous Squamous Cell Carcinoma and set forth in the Study Plan and will be mutually agreed to promptly following the Effective Date in accordance with Section 4.1 and (ii) any other Study mutually agreed to after the Effective Date for which the Parties have mutually agreed that this Section 2.7(a) should apply, during the period commencing with the date of first patient/first dose for such Study and ending twelve (12) months thereafter, Replimune will not except as otherwise provided in this Section 2.7(a), (i) collaborate with a Third Party to initiate (i.e., enroll a subject), (ii) enter into an arrangement with a Third Party to receive discounted or free supply of a PD-1 Antagonist, (iii) financially support or (iv) otherwise provide Replimune Compound, in each case for a study for the use of the Replimune Compound and a PD-1 Antagonist in concomitant or sequential administration in patients having the same tumor type identified in the Study Plan for such Study (each of (i), (ii), (iii) and (iv), a "Replimune Competitive Study"). Replimune's performance of a study for the use of the Replimune Compound and a marketed PD-1

Antagonist in concomitant or sequential administration shall not be deemed to be a Replimune Competitive Study if the PD-1 Antagonist is acquired on the open market and Replimune is not collaborating with the Third Party who is developing or commercializing such PD-1 Antagonist in the conduct of such study. The foregoing obligation shall not apply to (i) any study which otherwise meets the definition of a Replimune Competitive Study but which study is to be conducted in or for patients or subjects in [ ]* or (ii) the following existing Replimune study with the Replimune Compound: [ ]*.

(b) With respect to (i) the first Study which is agreed to be in Cutaneous Squamous Cell Carcinoma and set forth in the Study Plan and will be mutually agreed to promptly following the Effective Date in accordance with Section 4.1 and (ii) any other Study mutually agreed to after the Effective Date for which the Parties have mutually agreed that this Section 2.7(b) should apply, during the period commencing with the date of first patient/first dose for such Study and ending twelve (12) months thereafter, Regeneron will not except as otherwise provided in this Section 2.7(b), (i) collaborate with a Third Party to initiate (i.e., enroll a subject), (ii) enter into an arrangement with a Third Party to receive discounted or free supply of an Oncolytic Virus (iii) financially support or (iv) otherwise provide Regeneron Compound, in each case for a study for the use of the Regeneron Compound and an Oncolytic Virus in concomitant or sequential administration in patients having the same tumor type identified in the Study Plan for such Study (each of (i), (ii), (iii) and (iv), a "**Regeneron Competitive Study**"). Regeneron's performance of a study for the use of the Regeneron Compound and a marketed Oncolytic Virus in concomitant or sequential administration shall not be deemed to be a Regeneron Competitive Study if the Oncolytic Virus is acquired on the open market and Regeneron is not collaborating with the Third Party who is developing or commercializing such Oncolytic Virus in the conduct of such study. The foregoing obligation shall not apply to any study which otherwise meets the definition of a Regeneron Competitive Study but which study is to be conducted in or for patients or subjects in [ ]*.

(c) With respect to each Study set forth under a Study Plan, during the period commencing with the date of Study Completion and ending ninety (90) days thereafter, Replimune will not initiate a Replimune Competitive Study and Regeneron will not initiate a Regeneron Competitive Study (such studies referred to hereafter as to each Party as a "**Competitive Study**"), and neither Party will agree to perform a Competitive Study, or discuss a Competitive Study with a Third Party without complying with this Section 2.7. In the event a Party wishes to enter into exclusive negotiations with the other Party regarding the performance of subsequent Stud(ies) for the Combination for the same cancer subtype treated in the Study that was the subject of a Study Completion ("Subsequent Study"), such Party so desiring to negotiate shall provide the other Party with notice thereof within [ ]* after Study Completion. If such Party fails to delivers such notice to the other Party within such [ ]* period, then the other Party shall thereafter be free to engage in Competitive Study negotiations with Third Parties for, and enter into a written agreement for a Competitive Study with any Third Party without further obligations under this Section 2.7(c). In the event the Party so desiring to negotiate delivers such notice within the [ ]* time period, the Parties will engage in good faith negotiations, and each Party will permit the other Party to conduct and facilitate the other Party's conduct of, technical due diligence for a period of up to [ ]* after Study Completion ("Exclusive Negotiation Period") in an attempt to agree upon the terms and conditions pursuant to which the Parties would collaborate with respect to a Subsequent Study. If the Parties are able to reach agreement on such terms and conditions during the Exclusive Negotiation Period, then the Parties shall promptly thereafter (but in any event within [ ]* after agreement on such terms and conditions) enter into a definitive agreement reflecting such terms and the Exclusive Negotiation Period shall continue until the Parties have executed such definitive agreement. If the Parties fail to reach agreement during the Exclusive Negotiation Period on terms and conditions pursuant to which the Parties would perform a Subsequent Study, then each Party shall thereafter be free to engage in negotiations with Third Parties for, and enter into agreements with Third Parties for Subsequent Studies without further obligations under this Section 2.7(c).

during the Exclusive Negotiation Period on terms and conditions pursuant to which the Parties [ ]*, then each Party shall thereafter be free to engage in negotiations with Third Parties for, and enter into agreements with Third Parties [ ]* without further obligations under this Section 2.7(c).

(d) For clarity, nothing in Section 2.7(a), (b), and (c) shall be deemed to restrict Replimune or Regeneron from entering into a transaction with any Third Party to license, sell or otherwise grant or transfer, including by option, rights in or to further develop or commercialize the Replimune Compound or the Regeneron Compound.

(e) This Agreement does not create any obligation on the part of Regeneron to provide the Regeneron Compound for any activities other than each Study, nor does it create any obligation on the part of Replimune to provide the Replimune Compound for any activities other than each Study, and except as set forth in Section 2.7(a), (b), and (c), nothing in this Agreement shall (A) prohibit either Party from performing studies relating to its own Compounds, either individually or in combination with any other compound or product, in any therapeutic area, or (B) create an exclusive relationship between the Parties with respect to any Compound, including the Regeneron Compound and the Replimune Compound.

3. Conduct of Each Study.

3.1 Each Study Plan for a Study will expressly state which of the Parties shall be the Sponsoring Party for such Study. The Sponsoring Party shall hold the IND relating to such Study.

3.2 The Sponsoring Party shall ensure that such Study is performed in accordance with this Agreement, the Study Plan, the Protocol and all Applicable Law, including GCP, provided, however, that to the extent the Non-Sponsor Party is the Responsible Party for a particular clinical activity in accordance with the Clinical Obligations Schedule for a particular Study, it shall ensure such activities are performed in accordance with this Agreement, the Study Plan, the Protocol and all Applicable Law, including GCP.

3.3 The Parties hereby agree to use commercially reasonable, good faith efforts in executing their obligations under this Agreement and each Study Plan, including a Party's supply obligations under Article 8.

3.4 For each Study, the Sponsoring Party for such Study shall ensure that all directions in relation to its obligations as such Study's sponsor from any Regulatory Authority and/or ethics committee with jurisdiction over such Study are followed. Further, for each Study, the Sponsoring Party for such Study, in working with the Non-Sponsor Party, shall ensure that all Regulatory Approvals from any Regulatory Authority and/or ethics committee with jurisdiction over such Study are obtained prior to initiating performance of such Study.

3.5 Regulatory Interactions and Filings.

(a) Each Party (the "**Granting Party**") grants to the other Party (the "**Referencing Party**") a nonexclusive, non-transferable (except in connection with a permitted

assignment of this Agreement) "right of reference" (as defined in US FDA 21 CFR 314.3(b)), or similar "right of reference" as defined in applicable regulations in the relevant jurisdiction outside the U.S., with respect to the Regeneron Compound Specific Clinical Data (in the case where Regeneron is the Granting Party) and/or Replimune Compound Specific Clinical Data (in the case where Replimune is the Granting Party), solely as necessary for such Referencing Party to prepare, submit and maintain regulatory submissions related to such Referencing Party's Compound and Regulatory Approvals related thereto for use in the Combination, as and to the extent permitted in accordance with Section 3.7. Further, the Granting Party shall provide to the Referencing Party a cross-reference letter or similar communication to the applicable Regulatory Authority to effectuate such right of reference. Notwithstanding anything to the contrary in this Agreement, neither Party shall have any right to access the other Party's CMC data with respect to such Other Party's Compound. Regeneron will authorize FDA and other applicable Regulatory Authorities to cross-reference the appropriate Regeneron Compound INDs and CTAs to provide data access to Replimune sufficient to support conduct of each Study. Replimune will authorize FDA and other applicable Regulatory Authorities to cross-reference the appropriate Replimune Compound INDs and CTAs to provide data access to Regeneron sufficient to support conduct of each Study.

(b) For so long as Replimune has not obtained Regulatory Approval for the Replimune Compound as a monotherapy in the United States and the European Union, Replimune shall use commercially reasonable efforts to prepare, submit and file for Regulatory Approval to the FDA and the European Medicines Agency for the Combination in the indication that was evaluated under a given Study, assuming such Study results adequately support such a filing, subject to Regeneron's consent rights in Section 3.7. If Replimune determines that it does not wish to prepare, submit and file for Regulatory Approval for the Combination as set forth in the previous sentence, it shall promptly provide a written explanation to Regeneron outlining the scientific, clinical and/or commercial rationale for not doing so and Replimune shall consider any comment made by Regeneron in good faith in determining whether such decision by Replimune is consistent with its obligation to use such commercially reasonable efforts.

(c) If Replimune is the Sponsoring Party, Regeneron shall have the right (but no obligation) to participate in any discussions between Replimune and any Regulatory Authority regarding matters related specifically to either the Regeneron Compound or the Combination in connection with each Study, and to the extent reasonably practicable, Replimune shall provide sufficient advance notice to Regeneron of any such discussions to allow inclusion of questions from Regeneron. Regeneron shall have the right, (but no obligation) to include questions to any Regulatory Authority in connection with either the Regeneron Compound or the Combination in connection with each Study. If Replimune receives any comments or other inquiries from a Regulatory Authority that pertain to the Combination or the Regeneron Compound, Replimune shall promptly provide such comments to Regeneron, and Regeneron shall provide its response to Replimune no later than [ ]* from the date that Regeneron receives such comments or other inquiries from Replimune or such shorter period as may be required by such Regulatory Authority ("**Regeneron Response Period**"). For all comments or inquiries from a Regulatory Authority that pertain to the Combination, but not specifically to the Regeneron Compound, Replimune will consider in good faith Regeneron's reasonable comments. If such comments or other inquiries pertain specifically to the Regeneron Compound, Regeneron will promptly review and respond within the Regeneron Response Period and Replimune will forward such response to

the Regulatory Authority on Regeneron's behalf. In the event that it will take Regeneron more than [ ]* to provide a response, Regeneron will notify Replimune promptly (but no later than the end of the Regeneron Response Period), and provide Replimune with the reason the response cannot be provided within the Regeneron Response Period and with the timeframe within which Regeneron will provide its response, in which case Replimune will make reasonable efforts to accommodate Regeneron's reasonable request for additional time. If Regeneron does not provide such response or notice within the Regeneron Response Period, then Replimune may proceed to respond to the applicable Regulatory Authority in Replimune's sole good faith discretion. In any event, Regeneron shall endeavor to promptly provide such response to Replimune so that Replimune may provide a timely response to the Regulatory Authority. With respect to any comments or other inquiries from a Regulatory Authority regarding a Study that pertain specifically to the Regeneron Compound, Regeneron shall also be permitted to respond directly to such Regulatory Authority; provided however, that prior to providing its response to such Regulatory Authority, Regeneron shall (i) notify Replimune in writing within the applicable Regeneron Response Period that Regeneron intends to respond directly to such Regulatory Authority; (ii) provide Replimune with Regeneron's proposed response in writing; (iii) consider in good faith Replimune's reasonable comments thereto; and (iv) provide Replimune with a final copy of Regeneron's response for Replimune's records; provided, however, that Regeneron shall have the right to redact any proprietary information that is not related to the applicable Study or the Combination (such as CMC or critical material information). Subject to the conditions set forth in the foregoing sentence, if Regeneron elects to respond directly to such Regulatory Authority, Regeneron shall be responsible for providing its response within the deadline prescribed by such Regulatory Authority (if none, Regeneron shall nonetheless provide such response promptly). Unless otherwise agreed in the applicable Clinical Obligations Schedule, and. except for direct responses from Regeneron in accordance with this Section 3.5(b), Replimune shall conduct communications with Regulatory Authorities relating to each Study for which Replimune is the Sponsoring Party.

(d) If Regeneron is the Sponsoring Party, Replimune shall have the right (but no obligation) to participate in any discussions between Regeneron and any Regulatory Authority regarding matters related specifically to either the Combination or the Replimune Compound in connection with each Study, and to the extent reasonably practicable, Regeneron shall provide sufficient advance notice to Replimune of any such discussions to allow

inclusion of questions from Replimune. Replimune shall have the right, (but no obligation) to include questions to any Regulatory Authority in connection with either the Replimune Compound or the Combination in connection with each Study. If Regeneron receives any comments or other inquiries from a Regulatory Authority that pertain to the Combination or the Replimune Compound, Regeneron shall promptly provide such comments to Replimune, and Replimune shall provide its response to Regeneron no later than [ ]* from the date that Replimune receives such comments or other inquiries from Regeneron or such shorter period as may be required by such Regulatory Authority ("**Replimune Response Period**"). For all comments or inquiries that pertain to the Combination, but not specifically to the Replimune Compound, Regeneron will consider in good faith Replimune's reasonable comments. If such comments or other inquiries pertain specifically to the Replimune Compound, Replimune will promptly review and respond within the Replimune Response Period and Regeneron will forward such response to the Regulatory Authority on Replimune's behalf. In the event that it will take Replimune more than [ ]* to

provide a response, Replimune will notify Regeneron promptly (but no later than the end of the Replimune Response Period), and provide Regeneron with the reason the response cannot be provided within the Replimune Response Period and with the timeframe within which Replimune will provide its response, in which case Regeneron will make reasonable efforts to accommodate Replimune's reasonable request for additional time. If Replimune does not provide such response or notice within the Replimune Response Period, then Regeneron may proceed to respond to the applicable Regulatory Authority in Regeneron's sole good faith discretion. In any event, Replimune shall endeavor to promptly provide such response to Regeneron so that Regeneron may provide a timely response to the Regulatory Authority. With respect to any comments or other inquiries from a Regulatory Authority regarding a Study that pertain specifically to the Replimune Compound, Replimune shall also be permitted to respond directly to such Regulatory Authority; provided however, that prior to providing its response to such Regulatory Authority, Replimune shall (i) notify Regeneron in writing within the applicable Replimune Response Period that Replimune intends to respond directly to such Regulatory Authority; (ii) provide Regeneron with Replimune's proposed response in writing; (iii) consider in good faith Regeneron's reasonable comments thereto; and (iv) provide Regeneron with a final copy of Replimune's response for Regeneron's records; provided, however, that Replimune shall have the right to redact any proprietary information that is not related to such Study or the Combination (such as CMC or critical material information). Subject to the conditions set forth in the foregoing sentence, if Replimune elects to respond directly to such Regulatory Authority, Replimune shall be responsible for providing its response within the deadline prescribed by such Regulatory Authority (if none, Replimune shall nonetheless provide such response promptly). Unless otherwise agreed in the applicable Clinical Obligations Schedule, and except for direct responses from Replimune in accordance with this Section 3.5(d)), Regeneron shall have the right to conduct communications with Regulatory Authorities relating to each Study for which Regeneron is the Sponsoring Party.

(e) Each Party shall maintain reports and all related documentation in good scientific manner and in compliance with Applicable Law in connection with each Study. Each Party shall provide to the other Party all Study information and documentation reasonably requested by such Party to enable such Party to (i) comply with any of its legal, regulatory and/or contractual obligations, or any request by any Regulatory Authority, related to the Regeneron Compound, the Replimune Compound, or the Combination, as applicable, and (ii) determine whether such Study has been performed in accordance with this Agreement.

3.6 The Responsible Party shall provide to the other Party copies of all Clinical Data (except the Sample Testing Results which are separately covered by Section 3.8), in electronic form or other mutually agreeable alternate form and on mutually agreeable timelines. The Responsible Party shall require that Study investigators obtain patient authorizations and consents required under HIPAA, the EU Data Protection Directive or any other similar Applicable Law in connection with each Study, to permit such sharing of Clinical Data with the other Party.

3.7 All Clinical Data from any Regeneron Compound monotherapy arm of a Study or any other Clinical Data specific to the Regeneron Compound from a Study shall be owned by Regeneron ("**Regeneron Compound Specific Clinical Data**") and Replimune shall assign and hereby assigns to Regeneron, all of Replimune's interest in Regeneron Compound Specific

Clinical Data. All Clinical Data from any Replimune Compound monotherapy arm of a Study or any other Clinical Data specific to the Replimune Compound from a Study shall be owned by Replimune ("**Replimune Compound Specific Clinical Data**") and Regeneron shall assign and hereby assigns to Replimune, all of Regeneron's interest in Replimune Compound Specific Clinical Data. All Clinical Data, generated under each Study, except for Regeneron Compound Specific Clinical Data, Replimune Compound Specific Clinical Data and Sample Testing Results, shall be jointly owned by Replimune and Regeneron. With respect to a given Study, and notwithstanding the foregoing or anything to the contrary in this Agreement, (i) (a) Replimune and its Affiliates shall have the right, without the consent of, or any obligation to account to Regeneron, following Regulatory Approval of the Regeneron Compound as a monotherapy or for use in combination with another active agent, in each case in the indication that is being evaluated under such Study, to use all Regeneron Compound Specific Clinical Data from such Study to make regulatory filings, meet regulatory requirements and seek Regulatory Approval for the Combination and (b) if Regulatory Approval of the Regeneron Compound as a monotherapy or for use in combination with another active agent in each case in the indication that is being evaluated under such Study has not been achieved, Regeneron's written consent shall be required for Replimune to use Regeneron Compound Specific Clinical Data from such Study to make regulatory filings, meet regulatory requirements and seek Regulatory Approval for the Combination, such consent not to be unreasonably withheld, conditioned or delayed; and (ii) (a) Regeneron and its Affiliates shall have the right, without the consent of, or any obligation to account to Replimune, following Regulatory Approval of the Replimune Compound as a monotherapy or for use in combination with any other active agent in each case in the indication that is being evaluated under such Study, to use all Replimune Compound Specific Clinical Data from such Study to make regulatory filings, meet regulatory requirements and seek Regulatory Approval for the Combination, including the filing of any amendment or supplement to its Regulatory Approval of the Regeneron Compound, in each case, where permitted by and in accordance with Applicable Law and (b) if Regulatory Approval of the Replimune Compound as a monotherapy or for use in combination with another active agent in each case in the indication that is being evaluated under such Study has not been achieved, Replimune's written consent shall be required for Regeneron to use Replimune Compound Specific Clinical Data from such Study to make regulatory filings, meet regulatory requirements and seek Regulatory Approval for the Combination, including the filing of any amendment or supplement to its Regulatory Approval of the Regeneron Compound, in each case, where permitted by and in accordance with Applicable Law, such consent not to be unreasonably withheld,

conditioned or delayed *provided that* nothing in the foregoing clauses (i) and (ii) is intended or shall be construed as granting Replimune any right or license, expressly or impliedly, to make, have made, use, sell, offer for sale, or import the Regeneron Compound, or as granting Regeneron any right or license, expressly or impliedly, to make, have made, use, sell, offer for sale, or import the Replimune Compound. For the avoidance of doubt, Replimune shall not be able to use the Regeneron Compound Specific Clinical Data, and Regeneron shall not be able to use the Replimune Compound Specific Clinical Data, in each case for any purpose whatsoever other than as expressly specified in this Agreement, without the prior written consent of the other Party, subject to the rights of each Party to disclose such data to the extent permitted under Article 9. Regeneron Compound Specific Clinical Data shall be the Confidential Information of Regeneron and Replimune Compound Specific Clinical Data shall be the Confidential Information of Replimune. Notwithstanding the above and without limiting Section 2.7, these restrictions set

forth in this Section 3.7 and the restrictions set forth in Article 9, shall no longer apply to any portion of Clinical Data that has been made available to the public in accordance with this Agreement. Notwithstanding the above or anything to the contrary herein, either Party may share any Clinical Data as required by a Regulatory Authority or as may otherwise be required by Applicable Law. Notwithstanding anything to the contrary herein, to the extent Clinical Data includes Toxicity and Safety Data, and where because of its severity, frequency or lack of reversibility either Party needs to utilize such Toxicity and Safety Data with respect to its respective Compound or of the Combination in order to ensure patient safety, such Party may share such Toxicity and Safety Data with Third Parties.

3.8 Each Party shall use the Samples only for Sample Testing. The Sponsoring Party shall own Sample Testing Results unless otherwise set forth in the applicable Study Plan. The Sponsoring Party shall provide to the Non-Sponsoring Party the Sample Testing Results for the Sample Testing conducted by or on behalf of the Sponsoring Party, in electronic form or other mutually agreeable alternate form and on the timelines specified in the applicable Study Plan. The Non-Sponsoring Party may use the Sponsoring Party's Sample Testing Results, only for the purposes of (i) seeking Regulatory Approval of (A) its respective Compound as a monotherapy (provided that the Non-Sponsoring Party would not have the right to use any Sponsoring Party's Sample Testing Results that solely relate to that Sponsoring Party's Compound in seeking Regulatory Approval of such Non-Sponsoring Party's Compound), or the Combination, to the extent permitted under Section 3.7 and/or (B) any companion diagnostic to any pharmaceutical product containing its respective Compound for use as a monotherapy or the Combination, and (ii) filing and prosecuting patent applications for Joint Inventions and enforcing any resulting patents in accordance with Article 10; provided, however, that these restrictions shall no longer apply once the Sample Testing Results or portions thereof are available to the public in accordance with this Agreement. Further, the permitted uses that apply to jointly owned Clinical Data as set forth in the last sentence of Section 3.7 shall apply with respect to Sample Testing Results that are jointly owned to the extent set forth in the applicable Study Plan.

3.9 Within [ ]* following Study Completion for each Study, and in accordance with the timeframes set forth in this Section 3.9, the Responsible Party with respect to preparing the Final Study Report for such Study shall provide the Non-Responsible Party with an electronic draft of the Final Study Report for such Study, for the Non-Responsible Party to provide comments to the Responsible Party within [ ]* of its receipt of the draft of such Final Study Report. The Responsible Party shall consider in good faith such comments and, at either Party's reasonable request, the Parties shall meet in person or via teleconference within [ ]* after the Responsible Party's receipt of such comments to discuss such comments in good faith. The Responsible Party shall provide the Non-Responsible Party with a draft final version of each Final Study Report within [ ]* of the Responsible Party's receipt of the Non-Responsible Party's comments or a meeting between the Parties to discuss such comments, whichever is later. The Responsible Party shall consider in good faith any further comments of the Non-Responsible Party, and each Final Study Report shall not be deemed final until the Parties have mutually so agreed. In the event that the Parties are unable to agree upon a Final Study Report, the matter will be escalated to the Replimune Chief Medical Officer and the Regeneron Senior Vice President, Global Clinical Development, provided however that (1) in the event that the matter relates solely to the Regeneron Compound, Regeneron shall have final decision-making authority and (2) in the

event that the matter relates solely to the Replimune Compound, Replimune shall have final decision-making authority. "**Study Completion**" shall occur (i) for a randomized Study, on the fifth (5th) day after database lock of the Study results for such Study and (ii) for an open-label Study, when at least [ ]* patients in such Study, or if Study enrollment is less than [ ]* patients, the total enrolled patients in such Study, in each case have received [ ]* of treatment under the Study.

3.10 Subject to (i) Regeneron's consent rights with respect to Replimune's use of Regeneron Compound Specific Clinical Data and Replimune's consent rights with respect to Regeneron's use of Replimune Compound Specific Clinical Data and (iii) Section 3.7, in the event that either Party seeks Regulatory Approval either (x) to change its respective Compound's label (where such Regulatory Approval has already been obtained), or (y) to obtain initial approval of its Compound or the Combination, in each case, based in whole or in part on the results of a Study, the Parties will reasonably cooperate in the preparation of the requisite filings with Regulatory Authorities, including the Responsible Party providing the Non-Responsible Party with any information related to such Study required for such Party's filing (e.g., investigator financial disclosures).

3.11 Governance. The Parties shall form a joint development team (the "**Joint Development Committee**" or "**JDC**"), made up of an equal number of representatives of Regeneron and Replimune (not to exceed three (3) each), which shall have responsibility for coordinating all clinical, regulatory, Compound supply and other activities under, and pursuant to, this Agreement. Each Party may invite a reasonable number of additional representatives to JDC meetings, provided that advance notice is provided. In addition, the JDC will have responsibility for reviewing and agreeing upon any proposed changes to the Clinical Obligations Schedule for a Study that may be proposed by either Party. If the JDC does not reach consensus on a proposed change to the Clinical Obligations Schedule for a Study, then the then-existing Clinical Obligations Schedule for such Study shall govern. For each Study, each Party shall designate a project manager (the "**Project Manager**") on the applicable Study Plan who shall be responsible for implementing and coordinating activities, and facilitating the exchange of information between the Parties, with respect to the applicable Study. The JDC shall meet as soon as practicable after the first Study Effective Date and then during such time as there is an ongoing Study, no less than once each Calendar Quarter, and

more often as reasonably considered necessary at the request of either Party with reasonable notice, to provide an update on progress of each Study and make decisions regarding the conduct of each Study and any modifications to such Study's Protocol and Budget. Prior to any such meeting, each respective Project Manager shall provide an update in writing to the other Party's Project Manager, which update shall contain information about, as applicable, overall Study progress, recruitment status, ongoing data (if results are available), interim analysis (if results are available), final analysis and other information relevant to the conduct of the applicable Study. The JDC will attempt to reach decisions by consensus, except that Regeneron will determine in its sole discretion the dose and dosing regimen for the Regeneron Compound and Replimune will determine in its sole discretion the dose and dosing regimen for the Replimune Compound. The Parties hereby agree that changes to the responsibilities as set forth on the applicable Clinical Obligations Schedule require JDC consensus, and that changes to the Protocol may only be made in accordance with Section 4.1. When consensus is not achieved on any matter, the matter will be escalated to the

Replimune Chief Medical Officer and the Regeneron Senior Vice President, Global Clinical Development, provided however that (1) in the event that the matter relates solely to the Regeneron Compound, Regeneron shall have final decision-making authority and (2) in the event that the matter relates solely to the Replimune Compound, Replimune shall have final decision-making authority.

4. Protocol and Related Documents.

4.1 Unless otherwise agreed by the Parties as stated in the applicable Study Plan, the Protocol or Protocol synopsis and preliminary budget (as applicable) for each Study that has been agreed to by the Parties as of the Study Effective Date for such Study shall be attached to each Study Plan for such Study. Notwithstanding the foregoing, the Parties intend to finalize such Protocol within [ ]* (or such other time period as may be expressly stated in the applicable Study Plan) of the Study Effective Date, subject to the approval rights of each Party set forth in this Section 4.1; provided, that (a) if the Parties do not agree on a finalized Protocol within [ ]* days (or such other time period as may be expressly stated in the applicable Study Plan) of the Study Effective Date, then either Party may, by written notice to the other Party, terminate the applicable Study Plan, it being understood that a lack of agreement on the final Protocol within such time periods shall not be a breach of this Agreement by either Party, and (b) such right to terminate due to failure to agree upon the final Protocol must be based on material changes to the Protocol or Protocol synopsis attached to the Study Plan and agreed to by the Parties as of the Study Effective Date for such Study required or requested by a Regulatory Authority. Notwithstanding the above, Regeneron will determine the dose and dosing regimen for the Regeneron Compound and will have the final decision on all matters relating specifically to the Regeneron Compound and any information regarding the Regeneron Compound included in the Protocol for each Study, and Replimune will determine the dose and dosing regimen for the Replimune Compound and will have the final decision on all matters relating specifically to the Replimune Compound and any information regarding the Replimune Compound included in the Protocol for each Study. Subject to the third sentence of Section 7.1 and Section 8.1, to the extent any changes need to be made to the mutually agreed Protocol, the Sponsoring Party shall have the final decision regarding the contents of such Protocol; provided that any material changes (other than relating solely to the Non-Sponsoring Party's Compound) to such Protocol, and any changes (whether or not material) relating to the Non-Sponsoring Party's Compound, shall require the Non-Sponsoring Party's prior written consent. The Non-Sponsoring Party will provide such consent, or a written explanation for why such consent is being withheld, within [ ]* of receiving the Sponsoring Party's request therefor.

4.2 The Responsible Party shall prepare the patient informed consent form for the applicable Study in consultation with the other Party (it being understood that the portion of the informed consent form relating to the Other Party's Compound will be provided by such other Party). Any changes to such form that relate to the Other Party's Compound shall be subject to such other Party's written consent. The other Party will provide such consent, or a written explanation for why such consent is being withheld, within [ ]* of receiving the Responsible Party's request therefore.

4.3 *Financial Disclosure*. The Responsible Party, in working with the Other Party, shall be responsible for (a) tracking and collecting financial disclosure information from all "clinical investigators" involved in the Study and (b) preparing for submission by the Sponsor the certification and/or disclosure of the same in accordance with all Applicable Law, including, but not limited to, Part 54 of Title 21 of the United States Code of Federal Regulations (Financial Disclosure by Clinical Investigators) and related FDA Guidance Documents. The Responsible Party shall track and collect from all "clinical investigators" involved in the Study using one (1) "combined" certification and/or disclosure form for both Regeneron and Replimune. For purposes of this Section 4.3, the term "clinical investigators" shall have the meaning set forth in Part 54.2(d) of Title 21 of the United States Code of Federal Regulations.

4.4 *Transparency Reporting*. The Party making any payments and other transfers of value, including supply of Regeneron Compound and Replimune Compound, made to health care professionals, including, without limitation, investigators, steering committee members, data monitoring committee members, and consultants in connection with each Study in accordance with reporting requirements under Applicable Law, including, the Physician Payment Sunshine Act and state gift laws, and the European Federation of Pharmaceutical Industries and Associations Disclosure Code, and Replimune's and Regeneron's applicable policies, shall be solely responsible for reporting to the applicable Regulatory Authority such payments or transfers of value.

5. Adverse Event Reporting.

The Responsible Party will be solely responsible for compliance with all Applicable Law pertaining to safety reporting for the applicable Study and related activities. As soon as reasonably practical after the Study Effective Date (but in all cases prior to the first dosing of the first patient with a Product in a Study), the Parties will execute a new Pharmacovigilance Agreement or modify an existing Pharmacovigilance Agreement, as determined by the Sponsoring Party of the applicable Study to ensure the exchange of relevant safety data within appropriate timeframes and in appropriate format to enable the Parties to fulfill local and international regulatory reporting obligations and to facilitate appropriate safety reviews. The Pharmacovigilance Agreement will include safety data exchange procedures governing the coordination of collection, investigation, reporting, and exchange of information concerning any adverse

experiences, pregnancy reports, and any other safety information arising from or related to the use of the Regeneron Compound and Replimune Compound in each Study, consistent with Applicable Law. Such guidelines and procedures shall be in accordance with, and enable the Parties and their Affiliates to fulfill local and international regulatory reporting obligations to Regulatory Authorities and the investigators. The Responsible Party will transmit to the other Party serious related life threatening or death events as set forth in the applicable Pharmacovigilance Agreement. The Responsible Party will be responsible for reporting all adverse events to the applicable Regulatory Authorities and the investigators. Execution of the Pharmacovigilance Agreement covering a Study is a prerequisite to the initiation of the Study.

6. Term and Termination.

6.1 The term of this Agreement shall commence on the Effective Date and shall continue in full force and effect until terminated by either Party pursuant to this Article 6. The term of any Study Plan under this Agreement shall commence on the [ ]* for such [ ]* and shall continue in full force and effect until completion of the [ ]* for the relevant Study or until earlier terminated by either Party pursuant to this Article 6.

6.2 In the event that the Non-Sponsoring Party reasonably believes that its Compound is being used in a Study in an unsafe manner and the Sponsoring Party fails to incorporate changes into the applicable Protocol reasonably requested by the Non-Sponsoring Party to address such issue, the Non-Sponsoring may immediately terminate the Study Plan covering such Study and the supply of its Compound for such Study upon written notice to the Sponsoring Party.

6.3 Either Party may terminate this Agreement or a Study Plan if the other Party commits a material breach of this Agreement or a material breach of its obligations under the particular Study Plan, as the case may be, and such material breach continues for [ ]* after receipt of written notice thereof from the non-breaching Party specifying such material breach; provided that if such material breach cannot reasonably be cured within such [ ]*, the breaching Party shall be given a reasonable period of time to cure such breach (not to exceed [ ]* after receipt of notice).

6.4 Either Party may terminate this Agreement upon delivery of [ ]* written notice to the other Party if (a) at the time of delivery of a Final Study Report, there is no other active Study Plan for which a Final Study Report has not been delivered, and (b) within [ ]* after the delivery of the Final Study Report described in 6.4(a) above, the Parties have not entered into a Study Plan for another Study.

6.5 Either Party may terminate a Study Plan immediately upon written notice to the other party if the terminating Party determines in good faith, based on a review of the Clinical Data or other Study-related Know-How or information, that the Study performed pursuant to such Study Plan may unreasonably affect patient safety.

6.6 (a) Either Party may terminate a Study Plan immediately upon written notice to the other Party in the event that any Regulatory Authority takes any action, or raises any objection, that prevents the terminating Party from supplying its Compound for purposes of the Study performed pursuant to such Study Plan. (b) Additionally, either Party shall have the right to terminate this Agreement immediately (in whole or in part) upon written notice to the other Party in the event that it determines in its sole discretion to discontinue development of its Compound, for safety or legal reasons.

6.7 Each Party shall have the right to terminate this Agreement immediately upon any violation of Section 13.3 or any breach of a representation or warranty contained in Section 13.3 by the other Party. The non-terminating Party shall have no claim against the terminating Party for compensation for any loss of whatever nature by virtue of the termination of this Agreement in accordance with this Section 6.7. To the extent (and only to the extent) that the laws of the territory provide for any such compensation to be paid to the non-terminating Party upon the

termination of this Agreement under this Section 6.7, the non-terminating Party hereby expressly agrees (to the extent possible under the laws of the territory) to waive or to repay to the Party terminating this Agreement any such compensation or indemnity.

6.8 In the event that an individual Study Plan is terminated, Replimune shall, at Regeneron's sole discretion, promptly either return or destroy all unused Regeneron Compound provided by Regeneron to be used in connection with the Study performed under such Study Plan, pursuant to Regeneron's instructions. If Regeneron requests that Replimune destroy the unused Regeneron Compound, Replimune shall provide written certification of such destruction. Likewise, Regeneron shall, at Replimune's sole discretion, promptly either return or destroy all unused Replimune Compound provided by Replimune to be used in connection with the Study performed under such Study Plan, pursuant to Replimune's instructions. If Replimune requests that Regeneron destroy the unused Replimune Compound, Regeneron shall provide written certification of such destruction. Notwithstanding the foregoing, the providing party may, in its sole discretion, permit the receiving party to reallocate unused Compound for other ongoing Studies being conducted under other Study Plans. In the event that this Agreement is terminated, Replimune shall, at Regeneron's sole discretion, promptly either return or destroy all unused Regeneron Compound pursuant to Regeneron's instructions. If Regeneron requests that Replimune destroy the unused Regeneron Compound, Replimune shall provide written certification of such destruction. Likewise, Regeneron shall, at Replimune's sole discretion, promptly either return or destroy all unused Replimune Compound pursuant to Replimune's instructions. If Replimune requests that Regeneron destroy the unused Replimune Compound, Regeneron shall provide written certification of such destruction.

6.9 The provisions of Sections 2.7, 3.5, 3.7, 3.8, 6.9 through 6.11, 9.1 through 9.3, 13.2, 13.4, 14.2 14.3 and Articles 1 (Definitions), 5 (Adverse Event Reporting) (solely as to adverse event reporting required for any SADRs/SAEs arising from a Study and occurring post-termination), 7 (Costs of Collaboration Program), 10 (Intellectual Property), 11 (Reprints; Rights of Cross-Reference), 12 (Publications), 15 (Use of Name), 18 (Assignment and Sub-Contracting), 20 (No Additional Obligations), 21 (Dispute Resolution and Jurisdiction), 22 (Notices), 23 (Relationship of the Parties) and 25 (Construction) shall survive the expiration or termination of this Agreement, in each case for such time period as may be expressly provided therefor.

6.10 Termination of this Agreement shall be without prejudice to any claim or right of action of either Party against the other Party for any prior breach of this Agreement.

6.11 Upon termination of this Agreement, each Party and its Affiliates shall promptly return to the other Party or destroy any Confidential Information of the other Party (other than Clinical Data and Inventions) furnished to the receiving Party by the other Party, except that the receiving Party shall have the right to retain one copy for record-keeping purposes.

7. Costs of Collaboration Program.

7.1 Costs of Collaboration Program. In addition to the preliminary budget attached to the Study Plan at the Study Effective Date pursuant to Section 4.1, unless otherwise specified in

the applicable Study Plan, the final budget for each Study ("**Budget**") will be approved contemporaneously with the final Protocol in accordance with Section 4.1. Unless otherwise specified in the applicable Study Plan, Regeneron and Replimune will share equally the Development Costs of the Study as set forth in the applicable Budget. Any increase in the cost of a Study that exceeds the Budget by [ ]* of the total cost of such Study as set forth in the Budget must be agreed upon in advance by the JDC. The Parties hereby acknowledge and agree that any material change to a Protocol may require an increase to the corresponding Budget. The Parties further agree that (i) Regeneron shall provide the Regeneron Compound for use in each Study, as described in Article 8 below; and (ii) Replimune shall provide the Replimune Compound for use in each Study, as described in Article 8 below.

7.2 Payment Terms. Within [ ]* following the end of each calendar quarter during the Term and on a Study-by-Study basis, each Party (including any Affiliate) that has incurred any Development Costs in such calendar quarter in connection with the conduct of each Study hereunder shall deliver to the other Party a written report (each, a "**Development Costs Report**") setting forth in detail with supporting documentation the Development Costs incurred by such Party in such calendar quarter, by activity and in accordance with the applicable Budget. To the extent that the Development Costs Report shows that one Party has incurred and reported more Development Costs (that were included in the Budget for a particular Study or were otherwise approved in writing by the Parties) than the other Party with respect to the applicable calendar quarter (taking into account Prior Amounts), the Party incurring lesser Development Costs for such Study shall, within [ ]* of receipt (or delivery, as applicable) of the other Party's Development Costs Report with appropriate supporting documentation and a corresponding invoice, pay to such other Party an amount equal to fifty percent (50%) of the excess Development Costs incurred by such other Party for the applicable calendar quarter for such Study (taking into account Prior Amounts) . All payments made by a Party to the other Party under this Agreement shall be made in U.S. Dollars via wire transfer to the accounts as set forth in the applicable Study Plan. For the purpose of calculating any sums due under, or otherwise reimbursable pursuant to, this Agreement, a Party shall convert any amount expressed in a foreign currency into U.S. Dollar equivalents using the average rate of exchange for the calendar quarter to which such payment relates using the arithmetic mean of the daily rate of exchange, as reported in Thomson Reuters Eikon as the "Mid Price Close", or using any other source as agreed to by the Parties.

7.3 Records and Audit.

7.3.1 Each Party shall, and shall cause its Affiliates to, keep complete books and records pertaining to Development Costs in sufficient detail to calculate all amounts payable hereunder. Each Party shall retain all such books and records for a period of at least three (3) years after the end of the period to which such books and records pertain, or for such longer period as may be required by Applicable Law.

7.3.2 At the request of a Party, the other Party shall permit an independent public accounting firm of nationally recognized standing designated by such auditing Party and

reasonably acceptable to the other Party, at reasonable times during normal business hours and upon reasonable notice, to audit the books and records maintained pursuant to this Section 7.3 to ensure the accuracy of all reports and payments made hereunder; provided that the auditing Party shall cause such accounting firm to enter into a confidentiality agreement with the other Party in a form reasonably acceptable to such other Party obligating such firm to retain all such financial information in confidence pursuant to such confidentiality agreement. Such examinations may not (a) be conducted for any Calendar Quarter more than three (3) years after the end of such quarter, (b) be conducted more than once in any twelve (12) month period, or (c) be repeated for any Calendar Quarter. The accounting firm shall disclose to the auditing Party only whether the reports are correct and the specific details concerning any discrepancies. No other information shall be shared. Except as provided in Section 7.3.3, the cost of this audit shall be borne by the auditing Party, unless the audit reveals a variance of more than the greater of [ ]* or [ ]* from the reported amount, in which case the audited Party shall bear the cost of the audit. Subject to Section 7.3.3, no later than thirty (30) days after completion of the audit and reporting of the findings to the Parties, the audited Party shall pay the additional amounts, or the auditing Party shall reimburse the excess payments, as applicable.

7.3.3 In the event of a dispute with respect to any audit under Section 7.3.2, the Parties shall work in good faith to resolve the disagreement. If the Parties are unable to reach a mutually acceptable resolution of any such dispute within thirty (30) days, the dispute shall be submitted for resolution to a certified public accounting firm selected by the audited Party (subject to the approval of the auditing Party, such approval not to be unreasonably withheld, conditioned, or delayed) (the "**Audit Arbitrator**"); provided that the Parties shall cause the Audit Arbitrator to enter into a confidentiality agreement with the audited Party reasonably acceptable to the audited Party obligating such firm to retain all such financial information in confidence pursuant to such confidentiality agreement. The decision of the Audit Arbitrator shall be final and the costs of such arbitration as well as the initial audit shall be borne between the Parties in such manner as the Audit Arbitrator shall determine. Not later than [ ]* after such decision and in accordance with such decision, the audited Party shall pay the additional amounts, or the auditing Party shall reimburse the excess payments, as applicable.

7.3.4 Upon the expiration of the [ ]* period following the rendering of a Development Cost Report, such report shall be binding on the Parties, and each of the Parties and its Affiliates shall be released from any liability or accountability with respect to Development Costs for the period covered by such report.

7.4 Taxes. Replimune shall be liable for all income and other taxes (including interest) ("**Taxes**") imposed upon any payments made by Regeneron to Replimune under this Article 7, and likewise, Regeneron shall be liable for all Taxes imposed upon any payments made by Replimune to Regeneron under this Article 7. All payments made shall not be subject to withholding unless required by Applicable Law. If Applicable Law requires the withholding of Taxes, the payor shall make such withholding payments and shall subtract the amount thereof from the payments being made pursuant to this Agreement. The payor shall submit to the payee appropriate proof of payment of the withheld Taxes as well as the official receipts on a timely basis. Each Party agrees to reasonably cooperate with the other Party in claiming refunds or

exemptions from such deductions or withholdings under any relevant agreement or treaty which is in effect.

8. Supply and Use of the Compounds.

8.1 *Supply of the Compounds*. Replimune and Regeneron will each use commercially reasonable efforts to supply, or cause to be supplied, the quantities of its respective Compound as are set forth on the applicable Study Plan, on the timelines set forth in the applicable Study Plan, in each case, for use in the applicable Study. In the event the Parties agree to amend a Protocol in such a manner that may affect the quantities of each Party's Compound to be provided, the Parties shall discuss in good faith the appropriate quantities of each Party's Compound to be provided consistent with such amended Protocol and shall within [ ]* after such Protocol amendment update the applicable Study Plan to reflect the quantities of each Party's Compound to be provided and the schedule on which such quantities shall be provided consistent with such amended Protocol. If for any other reason either Party determines that the quantities of Compounds set forth on the applicable Study Plan are not sufficient to complete the applicable Study, such Party shall so notify the other Party, and the Parties shall discuss in good faith additional quantities of each Party's Compound to be provided and the schedule on which such additional quantities shall be provided for such Study. Each Party shall also provide to the other Party a contact person for the supply of its Compound under each Study Plan. Notwithstanding the foregoing, or anything to the contrary herein, in the event that a Party is not supplying its Compound in accordance with the terms of a Study Plan or this Agreement then the other Party shall have no obligation to supply its Compound under such Study Plan or hereunder, and in the event that a Party is allocating supply of its Compound pursuant to Section 8.10, then the other Party may allocate proportionally.

8.2 *Minimum Shelf Life Requirements*. Each Party shall use commercially reasonable efforts to supply its Compound hereunder for each Study with sufficient shelf-life remaining at time of Delivery for its anticipated use in the relevant Study.

8.3 *Provision of Compounds*. The Responsible Party with respect to supply of Compounds to the Study sites will obtain such Compounds as set forth in this Section 8.3.

8.3.1 The Non-Responsible Party with respect to supply of Compounds to the Study sites for a particular Study will deliver the Non-Responsible Party's Compound DAP (INCOTERMS 2010) to the Responsible Party's, or its designee's, location as specified by the Responsible Party ("**Delivery**" with respect to such Non-Responsible Party's Compound). The Parties will discuss and align on a mutually agreed-to lead time for supply of the Non-Responsible Party's Compound. Risk of loss for the Non-Responsible Party's Compound shall transfer from the Non-Responsible Party to the Responsible Party at Delivery. The cost incurred by the Non-Responsible Party for supplying (including all Manufacturing, acceptance and release testing) the Non-Responsible Party's Compound to the Responsible Party shall not be deemed a Development Cost for purposes of Section 7.2. All costs associated with the subsequent transportation, warehousing and distribution of the Non-Responsible Party's Compound from the Responsible Party to clinical sites shall be a Development Cost in accordance with Section 7.2. The Responsible Party will: (i) take delivery of the Non-Responsible Party's Compound supplied

hereunder; (ii) perform acceptance (including testing, if any) procedures allocated to it under the applicable Clinical Supply Quality Agreement; and promptly ship the Non-Responsible Party's Compound to the applicable Study sites, in compliance with cGMP, GCP and other Applicable Law and the applicable Clinical Supply Quality Agreement; and (iv) provide, from time to time at the reasonable request of the Non-Responsible Party, the following information: any applicable chain of custody forms, in-transport temperature recorder(s), records and receipt verification documentation, such other transport or storage documentation as may be reasonably requested by the Non-Responsible Party, and usage and inventory reconciliation documentation related to the Non-Responsible Party's Compound.

8.3.2 The Responsible Party is solely responsible, [ ]*, for supplying (including all Manufacturing, packaging, labeling, acceptance and release testing) the Responsible Party's Compound for each Study in accordance with Section 8.1. The cost incurred by the Responsible Party for supplying (including all Manufacturing, acceptance and release testing) the Responsible Party's Compound [ ]*. Further, the Responsible Party is solely responsible for the subsequent handling, storage, transportation, warehousing and distribution of the Responsible Party's Compound supplied hereunder from the Responsible Party to clinical sites, [ ]*. The Responsible Party shall (i) release the Responsible Party's Compound and (ii) subsequently label and pack, and promptly ship, the Responsible Party's Compound to the applicable Study sites in compliance with cGMP, GCP and other Applicable Law and the applicable Clinical Supply Quality Agreement.

8.4 *Labeling and Packaging; Use, Handling and Storage*.

8.4.1 The Parties' obligations with respect to the labeling and packaging of the Compounds are as set forth in the applicable Clinical Supply Quality Agreement. The Non-Responsible Party with respect to supply of Compounds to the Study sites for a particular Study shall provide the Non-Responsible Party's Compound to the Responsible Party in packaged and labeled form for clinical use, and otherwise in accordance with all Applicable Law, including cGMP, GCP, and health, safety and environmental protections.

8.4.2 The Responsible Party shall (i) use the Non-Responsible Party's Compound supplied for a particular Study solely for purposes of shipment to the applicable Study sites for such Study; (ii) not use the Non-Responsible Party's Compound in any manner inconsistent with this Agreement or for any commercial purpose; and (iii) use, store, transport, handle and dispose of the Non-Responsible Party's Compound in compliance with Applicable Law and the applicable Clinical Supply Quality Agreement, as well as all reasonable instructions of the Non-Responsible Party. The Responsible Party shall not reverse engineer, reverse compile, disassemble or otherwise attempt to derive the composition or underlying information, structure or ideas of the Non-Responsible Party's Compound, and in particular shall not analyze the Non-Responsible Party's Compound by physical, chemical or biochemical means except as necessary to perform its obligations under the applicable Clinical Supply Quality Agreement.

8.5 *Product Specifications*. A certificate of analysis shall accompany each shipment of the Non-Responsible Party's Compound to the Responsible Party. The Responsible Party shall

be responsible for any failure of the Non-Responsible Party's Compound to meet the Specifications to the extent caused by shipping, storage or handling conditions after Delivery to the Responsible Party hereunder.

8.6 *Changes to Manufacturing*. Each Party may make changes from time to time to its Compound or the Manufacturing Site without notice to the other Party; provided that such changes shall be in accordance with the applicable Clinical Supply Quality Agreement.

8.7 *Product Testing; Noncompliance*.

8.7.1 *After Manufacturer's Release.* After Manufacturer's Release of the Non-Responsible Party's Compound and concurrent with shipment to the Responsible Party, the Non-Responsible Party shall provide the Responsible Party with such certificates and documentation as are described in the applicable Clinical Supply Quality Agreement, which documentation will support release of the Non-Responsible Party's Compound for human use ("**Disposition Package**"). The Responsible Party shall, upon receipt of the Non-Responsible Party's Compound and within the time defined in the applicable Clinical Supply Quality Agreement, perform with respect to the Non-Responsible Party's Compound, the acceptance (including testing, if any) procedures allocated to it under the applicable Clinical Supply Quality Agreement. As described in the Clinical Supply Quality Agreement, the Responsible Party shall be solely responsible for taking all steps necessary to determine that the Responsible Party's Compound and the Non-Responsible Party's Compound, as applicable, are suitable for release before making such Responsible Party's Compound or Non-Responsible Party's Compound, as applicable, available for human use. For clarity, the Responsible Party shall be responsible for storage and maintenance of the Non-Responsible Party's Compound until it is shipped to the Study sites, which storage and maintenance shall be in compliance with (a) the Specifications for the Non-Responsible Party's Compound, the applicable Clinical Supply Quality Agreement and Applicable Law, and (b) any specific storage and maintenance requirements as may be provided by the Non-Responsible Party from time to time.

8.7.2 *Non-Conformance.*

(a) In the event that the Responsible Party becomes aware that the Non-Responsible Party's Compound may have a Non-Conformance, despite testing and quality assurance activities (including any activities conducted by the Parties under Sections 8.7.1), the Responsible Party shall immediately notify the Non-Responsible Party in accordance with the procedures of the applicable Clinical Supply Quality Agreement. The Parties shall investigate any Non-Conformance in accordance with Section 8.9 and any discrepancy between them shall be resolved in accordance with Section 8.8.

(b) In the event that any proposed or actual shipment of the Non-Responsible Party's Compound (or portion thereof) shall be agreed to have a Non-Conformance at the time of Delivery to the Responsible Party, then unless otherwise agreed to by the Parties, the Non-Responsible Party shall replace, using diligent efforts, such Non-Responsible Party's Compound as is found to have a Non-Conformance (with respect to the Non-Responsible Party's Compound that has not yet been administered in the course of performing the applicable Study). Unless

otherwise agreed to by the Parties in writing, the sole and exclusive remedies of the Responsible Party with respect to any Non-Responsible Party's Compound that is found to have a Non-Conformance at the time of Delivery shall be (i) replacement of such Non-Responsible Party's Compound as set forth in this Section 8.7.2(b), (ii) indemnification under Section 14.2 (to the extent applicable) and (iii) termination of the applicable Study Plan covering the Study for which the shipment was made pursuant to Section 6.3 (to the extent applicable, but subject to the applicable cure periods set forth therein); provided that, for clarity, the Responsible Party shall not be deemed to be waiving any rights under Section 8.16. In the event the Non-Responsible Party's Compound is lost or damaged by the Responsible Party after Delivery, the Non-Responsible Party shall provide additional amounts of the Non-Responsible Party's Compound (if available for the applicable Study) to the Responsible Party; provided that the Responsible Party shall reimburse the Non-Responsible Party for its fully-burdened manufacturing costs of such replaced Non-Responsible Party's Compound. Except as set forth in the foregoing sentence, the Non-Responsible Party shall have no obligation to replace the Non-Responsible Party's Compound with any amounts of the Non-Responsible Party's Compound other than the amounts of such Non-Responsible Party's Compound as has been agreed or determined to have a Non-Conformance at the time of Delivery to the Responsible Party.

(c) The Responsible Party shall be responsible for, and the Non-Responsible Party shall have no obligations or liability with respect to, any amounts of the Responsible Party's Compound supplied hereunder that is found to have a Non-Conformance. The Responsible Party shall replace, using diligent efforts, any of the Responsible Party's Compound as is found to have a Non-Conformance (with respect to the Responsible Party's Compound that has not yet been administered in the course of performing the applicable Study). Unless otherwise agreed to by the Parties in writing, the sole and exclusive remedies of the Non-Responsible Party with respect to any amounts of the Responsible Party's Compound that is found to have a Non-Conformance at the time of Delivery shall be (i) replacement of such amounts of the Responsible Party's Compound as set forth in this Section 8.7.2(c), (ii) indemnification under Section 14.2 (to the extent applicable) and (iii) termination of the applicable Study Plan covering the Study for which the shipment was made pursuant to Section 6.3 (to the extent applicable, but subject to the applicable cure periods set forth therein); provided that, for clarity, the Non-Responsible Party shall not be deemed to be waiving any rights under Section 8.16.

8.8 *Resolution of Discrepancies*. If the Non-Responsible Party disagrees with any determination of Non-Conformance of the Non-Responsible Party's Compound by the Responsible Party, such discrepancy shall be escalated to the head of quality of each Party (or such person's designee) for resolution.

8.9 *Investigations*. The process for investigations of any Non-Conformance shall be handled in accordance with the provisions set forth in the applicable Clinical Supply Quality Agreement.

8.10 *Shortage; Allocation*. Without limiting Section 8.1, in the event of a shortage of a Compound such that a Party reasonably believes that it will not be able to fulfill its supply obligations hereunder with respect to its Compound, such Party will provide prompt written notice to the other Party thereof (including the quantity of its Compound that such Party

reasonably determines it will be able to supply) and, upon request, the Parties will promptly discuss such situation (including how the quantities of Compound that such Party is able to supply hereunder will be allocated within the applicable Study, or among any ongoing Studies). Notwithstanding anything to the contrary contained herein, in the event of a shortage of a Party's Compound, the Party experiencing such shortage shall have sole discretion, subject to Applicable Law, to determine the quantity of Compound that it will be able to supply as a result of such shortage, and such Party shall not be deemed to be in breach of this Agreement for failure to supply quantities of such Party's Compound hereunder as a result of such shortage. In case of one Party's shortage of its Compound, the other Party shall be relieved of its obligations under this Agreement as they directly relate to the shortage.

8.11 *Regulatory Responsibility*. The responsibilities of the Parties with respect to communication and filings with Regulatory Authorities related to the Compounds supplied hereunder in connection with the applicable Study will be as set forth in the Pharmacovigilance Agreement and the applicable Clinical Supply Quality Agreement entered into by the Parties or their Affiliates in connection herewith, except that the Non-Responsible Party will separately submit any CMC information with respect to the Non-Responsible Party's Compound directly to any Regulatory Authorities, or delegate such responsibility to the Responsible Party, as may be necessary.

8.12 *Records; Audit Rights*. The Responsible Party will keep complete and accurate records pertaining to its use and disposition of the Non-Responsible Party's Compound (including its storage, shipping (cold chain) and chain of custody activities) and, upon reasonable request of the Non-Responsible Party, will make such records open to review by the Non-Responsible Party for the purpose of conducting investigations for the determination of the safety and/or efficacy of the Non-Responsible Party's Compound and the Responsible Party's compliance with this Agreement with respect to the Non-Responsible Party's Compound.

8.13 *Quality*. Quality matters related to the Manufacture and supply of the Compounds shall be governed by the terms of the applicable Clinical Supply Quality Agreement in addition to the relevant quality terms of this Agreement. As soon as reasonably practical after the Study Effective Date (but in all cases before the first shipment of Product to a Party hereunder), the Parties shall enter into the Clinical Supply Quality Agreement with respect to the supply of Product to be supplied to the other Party hereunder.

8.14 *Quality Control*. Each Party shall implement and perform operating procedures and controls for sampling, stability and other testing of its Compound, and for validation, documentation and release of its Compound and such other quality assurance and quality control procedures as are required by the Specifications, cGMPs and the applicable Clinical Supply Quality Agreement.

8.15 *Audits and Inspections*. The Parties' audit and inspection rights are governed by the terms of the applicable Clinical Supply Quality Agreement.

8.16 *Recalls*. Recalls of the Compounds shall be governed by the terms of the applicable Clinical Supply Quality Agreement.

9. Confidentiality.

9.1 Obligations of Non-Use and Non-Disclosure.

9.1.1 Replimune and Regeneron agree to hold in confidence any Confidential Information provided by the other Party, and neither Party shall use Confidential Information of the other Party except to fulfill such Party's obligations under this Agreement. Without limiting the foregoing, Regeneron may not use Confidential Information disclosed by or on behalf of Replimune relating to the [ ]*. Replimune may not use Confidential Information disclosed by or on behalf of Regeneron relating to the [ ]* or the [ ]* other than for purposes of each Study.

9.1.2 Neither Party shall, without the prior written permission of the other Party, disclose any Confidential Information of the other Party to any Third Party except to the extent disclosure (i) is required by Applicable Law, including any securities laws or regulations; (ii) is pursuant to the terms of this Agreement; or (iii) is necessary for the conduct of each Study, and in each case ((i) through (iii)) provided that the disclosing Party shall provide reasonable advance notice to the other Party before making such disclosure and further provided that the recipient of such Confidential Information shall be bound by an obligation of confidentiality at least as stringent as the obligations contained herein, except where otherwise provided in Section 9.1.3. For the avoidance of doubt, the Responsible Party may, without the other Party's consent, disclose the other Party's Confidential Information to clinical trial sites and clinical trial investigators performing the applicable Study, vendors that provide clinical trial services, the data safety monitoring and advisory board relating to the applicable Study, and regulatory agencies such as the FDA, EMA or other Regulatory Authorities working with the Responsible Party on the applicable Study, in each case to the extent necessary for the performance of the applicable Study and provided that such persons (other than governmental entities) are bound by an obligation of confidentiality at least as stringent as the obligations contained herein for a period of at least five (5) years.

9.1.3 Notwithstanding the foregoing, Regeneron may share Confidential Information of Replimune with [ ]* in connection with the development and commercialization of the Regeneron Compound under Regeneron's collaboration with [ ]*. In addition, and notwithstanding the foregoing clauses of this Section 9.1, each Party may disclose Confidential Information belonging to the other Party to the extent such disclosure is reasonably necessary in the following instances:

(a) prosecuting or defending litigation;

(b) complying with the rules or regulations of any securities exchange on which such Party's stock is listed; and

(c) (A) in communications with actual and/or bona fide [ ]* under confidentiality provisions as least as protective of Confidential Information as those of this Agreement; provided such disclosure shall be limited to the [ ]*; provided that (i) neither Party may disclose [ ]* in violation of the exclusivity restrictions on Competitive Studies as set forth in Section 2.7 and (ii) Regeneron may not disclose [ ]* and Replimune may not disclose [ ]*, in each

case with respect to a [ ]* Study, in the case where Sponsoring Party is in compliance with respect to its obligations under Section 12.2 but the data from the Study has not yet been published or publicly presented, unless the other Party has had an opportunity to review and approve the contents of such disclosure, such approval not to be unreasonably withheld, it being understood that no such consent may not be withheld for the disclosure [ ]* from such Study, and (B) in communications with actual and/or bona fide potential investors (including firewalled strategic investors) under confidentiality provisions as least as protective of Confidential Information as those of this Agreement; provided that, such disclosure shall be limited to Clinical Data and such confidentiality obligations shall extend for such time periods as are common in the industry, but in no event for less than twelve (12) months. [ ]*

9.2 Notwithstanding the foregoing, if a Party is required or otherwise intends to make a disclosure of any other Party's Confidential Information pursuant to this Section 9.1.3(a), it shall give [ ]* advance notice to such other Party of such impending disclosure and, in the case of disclosures under clause (a), endeavor in good faith to secure confidential treatment of such Confidential Information and/or reasonably assist the Party that owns such Confidential Information in seeking a protective order or other confidential treatment. If a Party is required by Applicable Law to disclose Confidential Information that is subject to 9.1.3(b), such Party shall, to the extent permitted by Applicable Law, [ ]* inform the other Party of the disclosure that is being sought in order to provide the other Party an opportunity to challenge or limit the disclosure obligations and such Party shall disclose only that portion of the Confidential Information it is required to disclose by Applicable Law. The Party required by Applicable Law to disclose the other Party's Confidential Information shall cooperate with the other Party, at the other Party's expense, in any attempt the other Party may make to obtain a protective order for its Confidential Information. If either Party concludes that a copy of this Agreement must be filed with the United States Securities and Exchange Commission or similar regulatory agency in a country other than the United States, such Party will provide the other Party with a copy of this Agreement showing any provisions hereof as to which the Party proposes to request confidential treatment, will provide the other Party with an opportunity to comment on any such proposed redactions and to suggest additional redactions, and will take such Party's reasonable and timely comments into consideration before filing the Agreement. Notwithstanding the foregoing Sections 9.1.1 and 9.1.2, (i) Inventions that constitute Confidential Information and are jointly owned by the Parties shall constitute the Confidential Information of both Parties and each Party shall have the right to use such Confidential Information consistent with Articles 10, 11 and 12 and (ii) Inventions that constitute Confidential Information and are solely owned by one Party shall constitute the Confidential Information of that Party and each Party shall have the right to use such Confidential Information consistent with Articles 10, 11 and 12.

9.3 All Confidential Information containing personal identifiable data shall be handled in accordance with all data protection and privacy laws, rules and regulations applicable to such Party.

10. Intellectual Property.

10.1 *Joint Ownership and Prosecution*.

10.1.1 Subject to the provisions of Sections 10.2 and 10.3, all rights to all Inventions relating to the Combination or improvements thereto (each a "**Jointly Owned Invention**"), and all Know-How that (i) is generated by either or both of the Parties in the course of the conduct of its activities under this Agreement, and (ii) is not a Jointly Owned Invention ("**Collaboration Know-How**"), shall be owned jointly by Replimune and Regeneron, and each Party hereby assigns to the other a joint ownership interest in all such Jointly Owned Inventions and Collaboration Know-How. Replimune and Regeneron shall each be entitled to use the Jointly Owned Inventions and Collaboration Know-How without accounting or financial payment to the other Party and without the consent of the other Party. For those countries where a specific license is required for a joint owner of a Jointly Owned

Invention or Collaboration Know-How to practice such Jointly Owned Invention or Collaboration Know-How in such countries, or to sublicense its rights thereunder (i) Regeneron hereby grants to Replimune a perpetual, irrevocable, non-exclusive, worldwide, royalty-free, fully paid-up license, transferable and sublicensable, under Regeneron's right, title and interest in and to all Jointly Owned Inventions and Collaboration Know-How to use such Inventions in accordance with the terms and conditions of this Agreement (including subject to Section 2.7) and (ii) Replimune hereby grants to Regeneron a perpetual, irrevocable, non-exclusive, worldwide, royalty-free, fully paid-up license, transferable and sublicensable, under Replimune's right, title and interest in and to all Jointly Owned Inventions and Collaboration Know-How to use such Inventions in accordance with the terms and conditions of this Agreement. For clarity, the terms of this Agreement do not provide Replimune or Regeneron with any rights, title or interest or any license to the other Party's background intellectual property except as necessary to conduct the applicable Study hereunder.

10.1.2 Promptly following the Effective Date, patent representatives of each of the Parties shall meet (in person or by telephone) to discuss the patenting strategy for any Jointly Owned Inventions that may arise. In particular, the Parties shall discuss which Party will file a patent application (including any provisional, substitution, divisional, continuation, continuation in part, reissue, renewal, reexamination, extension, supplementary protection certificate and the like) in respect of any Jointly Owned Invention (each, a "**Joint Patent Application**") and whether the Parties wish to appoint joint patent counsel. In any event, the Parties shall consult and reasonably cooperate with one another in, and shall equally share the expenses for, the preparation, filing, prosecution (including prosecution strategy) and maintenance of Joint Patent Applications and Joint Patents, including defense of any invalidity challenges thereto. In the event that one Party (the "**Filing Party**") wishes to file a patent application for a Jointly Owned Invention and the other Party (the "**Non-filing Party**") does not want to file any patent application for such Jointly Owned Invention or does not want to file in a particular country, the Non-filing Party shall execute such documents and perform such acts at the Filing Party's expense as may be reasonably necessary to effect an assignment of such Jointly Owned Invention to the Filing Party (in such country or all countries, as applicable) in a timely manner to allow the Filing Party to prosecute such patent application. Likewise, if a Party (the "**Opting-out Party**") wishes to discontinue the prosecution and maintenance of a Joint Patent Application, the other Party, at its sole option (the "**Continuing Party**"), may continue such prosecution and maintenance. In such event, the Opting-out Party shall execute such documents and perform such acts at the Continuing Party's expense as may be reasonably necessary to effect an assignment of such Joint Patent Application to the Continuing Party (in such country or all countries, as applicable) in a timely manner to allow the Continuing Party to prosecute and maintain such patent application. Any Joint Patent Application

or Jointly Owned Invention so assigned shall thereafter be owned solely by the Continuing Party or Filing Party (as applicable), and the Opting-out Party or Non-filing Party (as applicable) (i) to the extent in the United States, the European Union, the United Kingdom or Japan, the Opting-out Party or Non-filing Party (as applicable) shall have no right to practice under such Joint Patent Application or any patent claiming such Jointly Owned Invention in the applicable country or countries and, for the avoidance of doubt, any such patent, when issued, shall not be a Joint Patent and (ii) to the extent not in the United States, the European Union, the United Kingdom or Japan, the Opting-out Party or Non-filing Party (as applicable) shall have a royalty free non-exclusive license with the right to sublicense under such patent rights to make, use or sell a Replimune Compound in the case of Replimune and a Regeneron Compound in the name of Regeneron and, for the avoidance of doubt, any such patent, when issued, shall not be a Joint Patent.

10.1.3 Except as expressly provided in Section 10.1.2, each Party agrees to make no patent application based on the other Party's Confidential Information, and to give no assistance to any Third Party for such application, without the other Party's prior written authorization.

10.1.4 Each Party shall promptly provide the other Party with written notice reasonably detailing any known or alleged infringement or misappropriation by a Third Party of Joint Patents, as well as any declaratory judgment or similar actions alleging the invalidity, unenforceability or non-infringement of Joint Patents. Replimune shall have the first right to initiate legal action to enforce all Joint Patents against infringement or misappropriation by any Third Party that is manufacturing, developing, marketing, or seeking to market, an Oncolytic Virus, or to defend any declaratory judgment action relating thereto, at its sole expense. In the event such course of action includes litigation, Regeneron may choose, at its own expense, to be represented in such action by counsel of its own choice. If Regeneron is required as a necessary party to such action, each Party shall pay their respective expenses associated therewith. In the event that Replimune fails to initiate or defend such action, Regeneron shall not have any right to do so without consent of Replimune. Each Party shall keep the other Party reasonably informed as to any legal or commercial courses of action it pursues pursuant to this subsection. Regeneron shall have the first right to initiate legal action to enforce all Joint Patents against infringement or misappropriation by any Third Party that is manufacturing, developing, marketing, or seeking to market, a PD-1 Antagonist, or to defend any declaratory judgment action relating thereto, at its sole expense. In the event such course of action includes litigation, Replimune may choose, at its own expense, to be represented in such action by counsel of its own choice. If Replimune is required as a necessary party to such action, each Party shall pay their respective expenses associated therewith. In the event that Regeneron fails to initiate or defend such action, Replimune shall not have any right to do so without consent of Regeneron. Each Party shall keep the other Party reasonably informed as to any legal or commercial courses of action it pursues pursuant to this subsection. In connection with any proceeding, neither Party shall enter into any settlement without the prior written consent of the other Party. Neither Party shall have the first right to initiate legal action to enforce all Joint Patents against infringement or misappropriation by any Third Party that is manufacturing, developing, marketing, or seeking to market, the Combination, or to defend any declaratory judgment action relating thereto, at its sole expense, and the Parties shall not proceed in any such action unless and until they agree on which Party shall be the initiating Party in any such action.

10.1.5 If one Party brings any prosecution or enforcement action or proceeding against a Third Party with respect to any Joint Patent, the second Party agrees to be joined as a party plaintiff where necessary and to give the first Party reasonable assistance and authority to file and prosecute the suit, at the first Party's expense. The costs and expenses of the Party bringing suit under this Section 10.1.5 shall be borne by such Party, and any damages or other monetary awards recovered shall be shared as follows, unless otherwise agreed by the Parties: (i) the amount of such recovery actually received by the Party controlling such action shall be first applied proportionately to the out-of-pocket costs of each Party in connection with such action; and then (ii) any remaining proceeds shall be divided evenly between Replimune and Regeneron. A settlement or consent judgment or other voluntary final disposition of a suit under this Section 10.1.5 may not be entered into without the consent of the Party not bringing the suit.

10.2 *Inventions Owned by Replimune*. Notwithstanding Section 10.1, the Parties agree that all rights to (a) all Inventions relating solely to the Replimune Compound (regardless of inventorship) and (b) all Know-How (as distinct from Clinical Data which is covered by Section 3.7) that is generated (by either or both Parties) in the course of the conduct of its activities under this Agreement and relating solely to the Replimune Compound, in each case, are the exclusive property of Replimune, and Regeneron hereby assigns any rights therein to Replimune. Replimune shall be entitled to file in its own name relevant patent applications and to own resultant patent rights for any such Invention.

10.3 *Inventions Owned by Regeneron*. Notwithstanding Section 10.1, the Parties agree that all rights to (a) all Inventions relating solely to the Regeneron Compound (regardless of inventorship) and (b) all Know-How (as distinct from Clinical Data which is covered by Section 3.7) that is generated (by either or both Parties) in the course of the conduct of its activities under this Agreement and relating solely to the Regeneron Compound, in each case, are the exclusive property of Regeneron, and Replimune hereby assigns any rights therein to Regeneron. Regeneron shall be entitled to file in its own name relevant patent applications and to own resultant patent rights for any such Invention.

11. Reprints; Rights of Cross-Reference.

Consistent with applicable copyright and other laws, each Party may use, refer to, and disseminate reprints of scientific, medical and other published articles and materials from journals, conferences and/or symposia relating to each Study which disclose the name of the other Party, provided such use does not constitute an endorsement of any commercial product or service by the other Party.

12. Publications.

12.1 The Sponsoring Party will register each Study with the Clinical Trials Registry located at www.clinicaltrials.gov no sooner than one (1) week prior to the date of First Site Ready for such Study (the "**First Site Ready Date**"), and no later than the First Site Ready Date, except to the extent required otherwise by Applicable Law. The Sponsoring Party is committed to timely publication of the results following Study Completion for a Study, after the Parties (or relevant Party) have taken appropriate action to secure intellectual property rights (if any) arising

from such Study. Authorship of publications of the Clinical Data for a Study will be determined in accordance with appropriate scientific and academic standards and customs. Proper acknowledgement will be made for the contributions of each Party to the Clinical Data for each Study.

12.2 The Sponsoring Party shall use reasonable efforts to publish or present scientific papers dealing with each Study in accordance with accepted scientific practice and its internal policies and procedures.

12.3 The Parties agree that prior to submission of the results of each Study for publication or presentation or any other dissemination of results including oral dissemination, the publishing Party shall invite the other to comment on the content of the material to be published or presented according to the following procedure:

(i) At least [ ]* prior to submission for publication of any paper, letter or any other publication, or [ ]* prior to submission for presentation of any abstract, poster, talk or any other presentation, the publishing Party shall provide to the other Party the full details of the proposed publication or presentation in an electronic version (cd-rom or email attachment). Upon written request from the other Party, the publishing Party agrees not to submit data for publication/presentation for [ ]* in order to allow for actions to be taken to preserve rights for patent protection.

(ii) The publishing Party shall give reasonable consideration to any request by the other Party made at least [ ]* prior to the running of the periods mentioned in clause (i) above to modify the publication.

(iii) The publishing Party shall remove all Confidential Information of the other Party as requested by the other Party before finalizing the publication.

12.4 Neither Party shall publish, for any purpose, the results of the applicable Study without the prior written approval of the other Party, which approval shall be obtained in accordance with the procedure set forth in Section 12.3 (i) through (iii) and shall not be unreasonably delayed, conditioned or withheld.

12.5 Except as required by judicial order or Applicable Law, neither Party shall make any public announcement concerning this Agreement or any Study Plan without the prior written consent of the other Party. The Party preparing any such public announcement pursuant to the previous sentence shall provide the other Party with a draft thereof at least [ ]* prior to the date on which such Party would like to make the public announcement. Notwithstanding the foregoing, the Parties may issue a joint press release announcing the execution of this Agreement and the associated Study Plan executed concurrently with this Agreement. Each Party agrees to identify the other Party and acknowledge its support in any press release and any other publication or presentation of the results of the applicable Study.

13. Representations and Warranties; Disclaimers.

13.1 Each of Replimune and Regeneron represents and warrants to the other that it has the full right and authority to enter into this Agreement and to perform its obligations hereunder, that it is authorized by any necessary corporate action to enter into this Agreement and that it has no impediment

to enter into the transaction contemplated in this Agreement.

13.2 Neither Party undertakes that any Study shall lead to any particular result, nor is the success of a Study guaranteed. Neither Party accepts any responsibility for any use that the other Party may make of any Clinical Data nor for advice or information given in connection therewith.

13.3 *Anti-Corruption*.

13.3.1 In performing their respective obligations hereunder, the Parties acknowledge that the corporate policies of Replimune and Regeneron and their respective Affiliates require that each Party's business be conducted within the letter and spirit of the law. By signing this Agreement, each Party agrees to conduct the business contemplated herein in a manner that is consistent with all Applicable Law, including the U.S. Foreign Corrupt Practices Act, good business ethics, and its ethics and other corporate policies.

13.3.2 Each Party shall not contact, or otherwise knowingly meet with, any Government Official for the purpose of discussing activities arising out of or in connection with this Agreement, without the prior written approval of the other Party, except where such meeting is consistent with the purpose and terms of this Agreement and in compliance with Applicable Law.

13.3.3 Each Party represents that shall not employ or subcontract with any person or entity that is excluded, debarred, suspended or otherwise ineligible for government programs in the course of performing activities under this Agreement.

13.3.4 Each Party represents that it is not excluded, debarred, suspended, proposed for suspension or debarment, or otherwise ineligible for government programs.

13.4 EXCEPT AS EXPRESSLY PROVIDED HEREIN, REGENERON MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE REGENERON COMPOUND, AND REPLIMUNE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE REPLIMUNE COMPOUND. Replimune assumes no responsibility and shall have no liability for the nature, conduct or results of any research, testing or other work performed by or on behalf of Regeneron hereunder. Regeneron assumes no responsibility and shall have no liability for the nature, conduct or results of any research, testing or other work performed by or on behalf of Replimune hereunder

14. Insurance; Indemnification; Limitation of Liability.

14.1 *Insurance*. Each Party warrants that it maintains a policy or program of insurance or self-insurance at levels sufficient to support the indemnification obligations assumed herein. Specifically with regards to clinical trials, whichever party is designated as the Sponsor for the clinical trial, that party will be responsible to procure Products & Clinical Trial Liability insurance with an insurer that has an A.M. Best rating of at least A- VII that is valid for each country/geography that the trial is being conducted in and will name the other party as additional insured on the insurance policy. Upon written request, a Party shall provide evidence of such insurance.

14.2 *Indemnification*.

14.2.1 *Indemnification by Replimune*. Replimune agrees to defend, indemnify and hold harmless Regeneron, its Affiliates, and its and their employees, directors, subcontractors and agents from and against any loss, damage, reasonable costs and expenses (including reasonable attorneys' fees and expenses) incurred in connection with any claim, proceeding, or investigation by a Third Party arising out of this Agreement or any Study (a "**Liability**"), to the extent that such Liability (A) was directly caused by (i) negligence or willful misconduct on the part of Replimune (or any of its Affiliates, or its or their employees, directors, subcontractors or agents); (ii) a breach on the part of Replimune of any of its representations and warranties or any other covenants or obligations of Replimune (or any of its Affiliates, or its or their employees, directors, subcontractors or agents) under this Agreement or any Study Plan; or (iii) a breach of Applicable Law by Replimune, or (B) is determined to be attributable solely to the Replimune Compound and not the Combination.

14.2.2 *Indemnification by Regeneron*. Regeneron agrees to defend, indemnify and hold harmless Replimune, its Affiliates, and its and their employees, directors, subcontractors and agents from and against any Liability to the extent such Liability (A) was directly caused by (i) negligence or willful misconduct on the part of Regeneron (or any of its Affiliates, or its and their employees, directors, subcontractors or agents); (ii) a breach on the part of Regeneron of any of its representations and warranties or any other covenants or obligations of Regeneron (or any of its Affiliates, or its or their employees, directors, subcontractors or agents) under this Agreement or any Study Plan; or (iii) a breach of Applicable Law by Regeneron; or (B) is determined to be attributable solely to the Regeneron Compound and not the Combination.

14.2.3 *Other Liability.* Any Liability that is not indemnifiable under either Section 14.2.1 or 14.2.2 shall be shared equally by the Parties.

14.2.4 *Procedure*. The obligations of Regeneron and Replimune under this Section 14.2 are conditioned upon the delivery of written notice to Regeneron or Replimune, as the case might be, of any potential Liability within a reasonable time after the indemnified Party becomes aware of such potential Liability. The indemnifying Party will have the right to assume the defense of any suit or claim related to the Liability if it has assumed responsibility for the suit or claim in writing. The indemnified Party may participate in (but not control) the defense thereof at its sole cost and expense.

14.2.5 *Study Subjects*. Neither Party shall offer compensation on behalf of the other Party to any Study subject or bind the other Party to any indemnification obligations in favor of any Study subject without the express written consent of such other Party.

14.3 *LIMITATION OF LIABILITY*. OTHER THAN WITH RESPECT TO THE OBLIGATIONS OF EACH PARTY UNDER SECTION 2.7 AND ARTICLE 9, IN NO EVENT SHALL EITHER PARTY (OR ANY OF ITS AFFILIATES OR SUBCONTRACTORS) BE LIABLE TO THE OTHER PARTY FOR, NOR SHALL ANY INDEMNIFIED PARTY HAVE THE RIGHT TO RECOVER, EXCEPT AS PROVIDED BELOW, ANY SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS OR DAMAGES FOR LOST OPPORTUNITIES), WHETHER IN CONTRACT, WARRANTY, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE, ARISING OUT OF (x) THE MANUFACTURE OR USE OF ANY COMPOUND SUPPLIED HEREUNDER OR (y) ANY BREACH OF OR FAILURE TO PERFORM ANY OF THE PROVISIONS OF THIS AGREEMENT OR ANY REPRESENTATION, WARRANTY OR COVENANT CONTAINED IN OR MADE PURSUANT TO THIS AGREEMENT, EXCEPT THAT SUCH LIMITATION SHALL NOT APPLY TO ANY LIABILITY FOR DAMAGES PAID OR PAYABLE TO A THIRD PARTY BY AN INDEMNIFYING PARTY HEREUNDER.

15. Use of Name.

Except as otherwise provided herein, neither Party shall have any right, express or implied, to use in any manner the name or other designation of the other Party or any other trade name, trademark or logo of the other Party for any purpose in connection with the performance of this Agreement.

16. Force Majeure.

If in the performance of this Agreement, one of the Parties is prevented, hindered or delayed by reason of any cause beyond such Party's reasonable control (*e.g.*, war, riots, fire, strike, governmental laws), such Party shall be excused from performance to the extent that it is necessarily prevented, hindered or delayed ("**Force Majeure**"). The non-performing Party will notify the other Party of such Force Majeure within ten (10) days after such occurrence by giving written notice to the other Party stating the nature of the event, its anticipated duration, and any action being taken to avoid or minimize its effect. The suspension of performance will be of no greater scope and no longer duration than is necessary and the non-performing Party will use commercially reasonable efforts to remedy its inability to perform.

17. Entire Agreement; Modification.

The Parties agree to the full and complete performance of the mutual covenants contained in this Agreement. This Agreement, together with the Clinical Supply Quality Agreement(s), the Pharmacovigilance Agreement and any Study Plan, constitutes the sole, full and complete agreement by and between the Parties with respect to the subject matter of this Agreement, and all prior agreements, understandings, promises and representations, whether written or oral, with respect thereto are superseded by this Agreement. No amendments, changes, additions, deletions

or modifications to or of this Agreement shall be valid unless reduced to writing and signed by the Parties hereto.

18. Assignment.

Neither Party shall assign or transfer this Agreement or any Study Plan without the prior written consent of the other Party, which consent shall not be unreasonably withheld; provided, however, that either Party may assign this Agreement or any Study Plan, in whole or in part, to one or more of its Affiliates without the other Party's consent, and any and all rights and obligations of either Party may be exercised or performed by its Affiliates, provided that such Affiliates agree to be bound by this Agreement. Notwithstanding the foregoing, Regeneron may, without Replimune's consent, assign this Agreement and the Study Plans and its rights and obligations hereunder and thereunder in connection with a Change of Control of Regeneron and Replimune may, without Regeneron's consent, assign this Agreement and the Study Plans and its rights and obligations hereunder and thereunder in connection with a Change of Control of Replimune.

19. Invalid Provision.

If any provision of this Agreement is held to be illegal, invalid or unenforceable, the remaining provisions shall remain in full force and effect and will not be affected by the illegal, invalid or unenforceable provision. In lieu of the illegal, invalid or unenforceable provision, the Parties shall negotiate in good faith to agree upon a reasonable provision that is legal, valid and enforceable to carry out as nearly as practicable the original intention of the entire Agreement.

20. No Additional Obligations.

Replimune and Regeneron have no obligation to renew this Agreement or apply this Agreement to any clinical trial other than each Study. Neither Party is under any obligation to enter into another type of agreement at this time or in the future.

21. Dispute Resolution and Jurisdiction.

21.1 The Parties shall attempt in good faith to settle all disputes arising out of or in connection with this Agreement or any Study Plan in an amicable manner. Any claim, dispute or controversy arising out of or relating to this Agreement or any Study Plan, including the breach, termination or validity hereof or thereof (each, a "**Dispute**"), shall be governed by and construed in accordance with the substantive laws of the State of New York, without giving effect to its choice of law principles.

21.2 Each Party irrevocably and unconditionally submits to the exclusive jurisdiction of the United States District Court for the Southern District of New York solely and specifically for the purposes of any action or proceeding arising out of or in connection with this Agreement (other than appeals therefrom), waives any objections to such jurisdiction and venue and agrees not to commence any action, suit or proceeding relating to this Agreement except in such courts.

21.3 Nothing contained in this Agreement or any Study Plan shall deny either Party the right to seek injunctive or other equitable relief from a court of competent jurisdiction in the context of a bona fide emergency or prospective irreparable harm, and such an action may be filed or maintained notwithstanding any ongoing discussions between the Parties.

22. Notices.

All notices or other communications that are required or permitted hereunder shall be in writing and delivered personally, sent by facsimile (and promptly confirmed by personal delivery or overnight courier), or sent by internationally-recognized overnight courier addressed as follows:

If to Replimune, to:

Replimune Group, Inc.
18 Commerce Way Suite 4800
Woburn, Massachusetts 01801
Attention: Robert Coffin, CEO

With a copy to:

Replimune Group, Inc.
18 Commerce Way Suite 4800
Woburn, Massachusetts 01801
Attention: Pamela Esposito, CBO

If to Regeneron, to:

Regeneron Pharmaceuticals, Inc.
777 Old Saw Mill River Road
Tarrytown, New York 10591
Attention: General Counsel

With a copy (which shall not constitute notice) to:

Regeneron Pharmaceuticals, Inc.
777 Old Saw Mill River Road
Tarrytown, New York 10591
Attention: Vice President, Head of Business Development

23. Relationship of the Parties.

The relationship between the Parties is and shall be that of independent contractors, and does not and shall not constitute a partnership, joint venture, agency or fiduciary relationship. Neither Party shall have the authority to make any statements, representations or commitments of any kind, or take any actions, which are binding on the other Party, except with the prior written consent of the other Party to do so. All persons employed by a Party will be the employees of such Party and not of the other Party and all costs and obligations incurred by reason of any such employment shall be for the account and expense of such Party.

24. Counterparts and Due Execution.

This Agreement and any amendment may be executed in two (2) or more counterparts (including by way of facsimile or electronic transmission), each of which shall be deemed an original, but all of which together shall constitute one and the same instrument, notwithstanding any electronic transmission, storage and printing of copies of this Agreement from computers or printers. When executed by the Parties, this Agreement shall constitute an original instrument, notwithstanding any electronic transmission, storage and printing of copies of this Agreement from computers or printers. For clarity, facsimile signatures and signatures transmitted via PDF shall be treated as original signatures.

25. Construction.

Except where the context otherwise requires, wherever used, the singular will include the plural, the plural the singular, the use of any gender will be applicable to all genders, and the word “or” is used in the inclusive sense (and/or). Whenever this Agreement refers to a number of days, unless otherwise specified, such number refers to calendar days. The captions of this Agreement are for convenience of reference only and in no way define, describe, extend or limit the scope or intent of this Agreement or the intent of any provision contained in this Agreement. The term “including” as used herein shall be deemed to be followed by the phrase “without limitation” or like expression. The term “will” as used herein means shall. References to “Article,” “Section” or “Appendix” are references to the numbered sections of this Agreement and the appendices attached to this Agreement, unless expressly stated otherwise.

Except where the context otherwise requires, references to this "Agreement" shall include the appendices attached to this Agreement. The language of this Agreement shall be deemed to be the language mutually chosen by the Parties and no rule of strict construction will be applied against either Party hereto.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the respective representatives of the Parties have executed this Agreement as of the Effective Date.

REPLIMUNE, INC

By: /s/ Robert Coffin

Robert Coffin
Name

Chief Executive Officer
Title

CONFIDENTIAL

*CONFIDENTIAL TREATMENT REQUESTED.

IN WITNESS WHEREOF, the respective representatives of the Parties have executed this Agreement as of the Effective Date.

REGENERON PHARMACEUTICALS, INC.

By: /s/ Leonard Schleifer

Leonard Schleifer, MD, PhD
Name

Chief Executive Officer
Title

CONFIDENTIAL

*CONFIDENTIAL TREATMENT REQUESTED.

Appendix A

FORM OF STUDY PLAN

Study Plan No. [·]

This Study Plan No. [·] ("**Study Plan No.** [·]") is governed by the terms of that certain Master Clinical Trial Collaboration and Supply Agreement in effect by and among is by and among Regeneron Pharmaceuticals, Inc., having a place of business at 777 Old Saw Mill River Road, Tarrytown, NY 10591 ("Regeneron"), and [Replimune Ltd. having a place of business at 18 Commerce Way, Woburn, MA 01801] ("**Replimune**"), dated [DATE], 2018 (the "**Agreement**"). Any item in this Study Plan No. [·] that is inconsistent with Sections 1-25 of the Agreement is invalid unless this Study Plan No. [·] expressly states that the Parties intend to amend a specific provision of Sections 1-25 of the Agreement and has been duly executed by appropriate authorized representatives of the Parties.

(a) **Study Identifier** (including tumor type, line of therapy, study number):

(b) **Study Effective Date**: [DATE]

(c) **Sponsoring Party**: [PARTY]

(d) **Project Manager**:

(i) Replimune:

(ii) Regeneron:

(e) **Wire Instructions**:

(i) Replimune:

(ii) Regeneron:

(f) **Protocol (or Protocol Synopsis)**: See Exhibit 1.

(g) **Compound Supply**: See Exhibit 2.

(h) **Sample Analysis and Ownership and Sharing**: See Exhibit 3.

(i) **Clinical Obligations Schedule**: See Exhibit 4.

(j) **Budget and Cost Share**: See Exhibit 5.

(k) **Press Release**: See Exhibit 6. [**NTD: Include only if Study is not the subject of a Press Release issued upon execution of the Master Agreement**]

(l) Other deviations

[*Remainder of page intentionally left blank*]

IN WITNESS WHEREOF, the respective representatives of the Parties have executed this Study Plan No. [·] as of the Study Effective Date.

REPLIMUNE, INC.

By: _____

_____
Name

_____
Title

IN WITNESS WHEREOF, the respective representatives of the Parties have executed this Study Plan No. [·] as of the Study Effective Date.

REGENERON PHARMACEUTICALS, INC.

By: _____

Name: _____
Title: _____

Exhibit 1

PROTOCOL (OR PROTOCOL SYNOPSIS)

[SEE ATTACHED]

Exhibit 2

COMPOUND SUPPLY

[SEE ATTACHED]

Exhibit 3

SAMPLE ANALYSIS OWNERSHIP AND SHARING

[SEE ATTACHED]

Exhibit 4

CLINICAL OBLIGATIONS SCHEDULE

[SEE ATTACHED]

Exhibit 5

BUDGET AND COST SHARE

[SEE ATTACHED]

Exhibit 6

PRESS RELEASE

[SEE ATTACHED]

Exhibit 23.1

Consent of independent registered public accounting firm

We hereby consent to the use in this Amendment No. 2 to the Registration Statement on Form S-1 of Replimune Group, Inc. of our report dated June 11, 2018, except for the effects of the forward stock split discussed in Note 16 to the consolidated financial statements, as to which the date is July 10, 2018, relating to the financial statements of Replimune Group, Inc., which appears in this Registration Statement. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
July 10, 2018

QuickLinks