

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Evelo Biosciences, Inc.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

2834
(Primary Standard Industrial
Classification Code Number)

46-5594527
(I.R.S. Employer
Identification No.)

620 Memorial Drive, Suite 200
Cambridge, Massachusetts 02139
(617) 577-0300

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Balkrishan (Simba) Gill, Ph.D.
President and Chief Executive Officer
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(617) 577-0300

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

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 of 1933, check the following box. ☐

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. ☐

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. ☐

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. ☐

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
(Do not check if a smaller reporting company)		Emerging growth company	<input checked="" type="checkbox"/>

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

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities To Be Registered	Proposed Maximum Aggregate Offering Price (1)(2)	Amount of Registration Fee (3)
Common Stock, \$0.001 par value per share	\$	\$

- (1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.
- (2) Includes the aggregate offering price of additional shares that the underwriters have the option to purchase to cover over-allotments, if any.
- (3) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price.

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 or until the Registration Statement shall become effective on such date as the 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. We may not sell these securities 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 it is not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS
SUBJECT TO COMPLETION
DATED _____, 2018

Shares



COMMON STOCK

Evelo Biosciences, Inc. is offering _____ shares of its common stock. This is our initial public offering and no public market currently exists for our shares. We anticipate that the initial public offering price will be between \$ _____ and \$ _____ per share.

We intend to apply to list our common stock on The Nasdaq Global Market under the symbol “_____”.

We are an “emerging growth company” as defined under the federal securities laws, and as such, we have elected to comply with certain reduced reporting requirements for this prospectus and may elect to do so in future filings. Investing in our common stock involves risks. Please see “[Risk Factors](#)” beginning on page 10.

	<u>Per Share</u>	<u>Total</u>
Initial public offering price	\$ _____	\$ _____
Underwriting discount and commissions (1)	\$ _____	\$ _____
Proceeds, before expenses, to us	\$ _____	\$ _____

(1) See the section titled “Underwriting” for a description of the compensation payable to underwriters.

We have granted the underwriters the right to purchase up to _____ additional shares of common stock from us to cover over-allotments.

The Securities and Exchange Commission and state securities regulators have not approved or disapproved of these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares of common stock to purchasers on or about _____, 2018.

MORGAN STANLEY

COWEN

BMO CAPITAL MARKETS

JMP SECURITIES

The date of this prospectus is _____, 2018.

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Neither we nor the underwriters have authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus or in any applicable free writing prospectus is accurate only as of its date, regardless of its time of delivery or any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

Through and including , 2018 (25 days after the commencement of this offering), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the obligation of dealers 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 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 outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside the United States.

Solely for convenience, the trademarks, trade names and service marks may appear in this prospectus with the ® or ™ symbols, but any such references are not intended to indicate, in any way, that we forgo or will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensors to these trademarks, trade names and service marks. All trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, especially the sections entitled “Risk Factors,” “Special Note Regarding Forward-Looking Statements” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes appearing at the end of this prospectus, before making an investment decision.

As used in this prospectus, unless the context otherwise requires, references to “we,” “us,” “our,” “the Company,” “our Company” and “Evelo” refer to the consolidated operations of Evelo Biosciences, Inc. and its consolidated subsidiary.

Overview

Evelo Biosciences is pioneering the development of therapies designed to act on the gut-body network. The action of our therapies is based on our growing understanding of the central role of the gut in controlling immune and biological activity throughout the body. The gut-body network represents the connections of the gut to all organs and tissues, which enables the gut to exert a significant level of control over the body’s immune and biological systems. The centrality of the gut-body network to the immune system has only recently become appreciated, and modern medicine and drug discovery have largely overlooked the importance of the gut-body network in fighting disease. We believe that we have the potential to use the unexplored biology of the gut-body network to develop a new class of therapies that could transform the treatment of many major diseases, potentially driving profound benefits to patients and society.

The gut, or the gastrointestinal tract, is the largest part of the immune system and is a central hub of the body’s network of lymphatic vessels. Immune cells from around the body circulate via these lymphatic vessels through tissues of the gut, where they are conditioned by exposure to the many antigens and immunomodulatory agents that continuously pass through the gut. These conditioned immune cells then continue to travel throughout the body and can impact disease and health at all sites of the body. Microbes, in particular, have the ability to condition immune cells in the gut.

We are developing orally-delivered pharmaceutical compositions of specific strains of naturally-occurring microbes derived from a single clone, which we refer to as monoclonal microbes. Our monoclonal microbes are designed to act on the gut-body network. We and our collaborators have observed in preclinical studies that specific monoclonal microbes can downregulate or upregulate immune responses throughout the body by acting on the gut-body network with naturally-evolved pharmacology. We believe that monoclonal microbes exert their effects through interactions with host immune cells as they pass through the gut. We have observed in preclinical animal models that our monoclonal microbes neither circulate throughout the body nor colonize the gut. These properties of monoclonal microbes could present significant potential advantages over existing therapies, including safety, efficacy and convenience.

We have built a proprietary platform designed to develop monoclonal microbes as therapeutics. Our platform integrates tools and capabilities necessary to source, select, develop and manufacture monoclonal microbes as therapies. The efficiency of our platform has, in a relatively short period of time, allowed us to produce three product candidates for a range of inflammatory diseases and cancer that we plan to advance into clinical trials in .

We believe that monoclonal microbials have the potential to address significant patient need at various stages of disease. We believe this is due to their potentially superior characteristics over current therapies and the advantages of our platform, specifically:

- We have observed activity in animal models for each of our lead development programs. Each of our monoclonal microbials acts through multiple naturally-evolved biological pathways. By acting on multiple pathways simultaneously, we believe monoclonal microbials can impact disease in ways that are not addressable with current single-target therapies.
- We believe our monoclonal microbials are likely to be well tolerated given that they are single strains of naturally-evolved human commensal microbes that act on the gut-body network without significant risk of systemic exposure. Monoclonal microbials have the potential to be used at earlier stages of disease and, by extension, in many more patients than current immunomodulatory drugs due to their potential tolerability advantages.
- Our development of monoclonal microbials has the potential to be more efficient than those other therapeutic classes such as cell therapy, monoclonal antibodies and small molecules. We believe that monoclonal microbials do not require the lengthy target validation and compound discovery requirements of conventional drug discovery. Additionally, we believe the manufacture of monoclonal microbials is meaningfully faster than that of certain other biologics and can further accelerate our path to clinical testing and commercialization.

Our product development strategy is to evaluate a range of monoclonal microbials with different activities in clinical trials across multiple diseases. The initial trials for our product candidates are expected to provide information on safety and biomarkers of immune response at and beyond the site of disease. We believe this biomarker data will enable expansion into a broad range of clinical indications. We expect to initiate clinical trials for our first two monoclonal microbial candidates, EDP1066 and EDP1815, in inflammatory diseases in _____ and _____, respectively, with initial biomarker and clinical data expected in _____ and _____, respectively. We are also developing two monoclonal microbial therapies in oncology. The first is EDP1503, for which we expect to initiate a clinical trial in _____, to obtain initial biomarker data in _____ and to obtain initial efficacy data in _____. We expect to select our second oncology product candidate from several other monoclonal microbials in our discovery program.

Our initial clinical product candidates and additional potential future areas of therapeutic focus are illustrated below.

		Expected first-in-human trials	Initial clinical data
Inflammatory Diseases	Psoriasis	EDP1066	, 20
		EDP1815	, 20
	Atopic Dermatitis	EDP1066	, 20
		EDP1815	, 20
	Rheumatoid Arthritis	Candidate selection	, 20
	Ulcerative Colitis / Crohn's Disease	Candidate selection	, 20
Oncology	Melanoma	EDP1503	, 20
	Colorectal Cancer	Candidate selection	, 20
	Renal Cell Carcinoma	Candidate selection	, 20
Therapeutic Areas w/ Preclinical Data	Neuro-inflammation/degeneration (e.g. multiple sclerosis) Liver diseases (e.g. non-alcoholic steatohepatitis) Type I diabetes		
Additional Therapeutic Areas	Food allergy Respiratory diseases (e.g. asthma) Metabolism (e.g. obesity, type II diabetes) Neurobehavior (e.g. autism, depression)		

Beyond our first set of clinical product candidates, we have identified several other potential candidates from our discovery program, and we are continuing to invest in the discovery of additional potential candidates. We believe monoclonal microbials and our platform have broad potential utility beyond our initial therapeutic focus areas of inflammatory diseases and oncology, and we plan to pursue many opportunities in which our platform has the potential to transform medicine.

Our Strategy

Our goal is to create and develop a new class of therapies that have the potential to transform the treatment of a broad range of diseases by focusing on the gut-body network. We believe we are the pioneers in exploring a new understanding of this biology. Key elements of our strategy to achieve this goal are to:

- realize the full potential of the gut-body network to create an expansive and diversified product portfolio;
- develop best-in-class therapies to improve outcomes across various stages of disease;
- generate early clinical readouts with biomarker driven validation to efficiently advance our product candidates;
- industrialize monoclonal microbials and capitalize on our first mover advantage;

- strengthen and expand our intellectual property to protect our platform; and
- collaborate to realize the potential of the gut-body network and monoclonal microbials.

Evelo and Flagship Pioneering

Evelo, a Flagship Pioneering company, was founded by the Flagship VentureLabs® unit in 2014. Evelo emerged from VentureLabs' proprietary innovation and company-origination process, building upon explorations that focused on the interface between microbes and the immune system, ultimately revealing the privileged relationship between the two as well as means to use microbes to control the immune system. The VentureLabs founding team recognized the potential for microbes administered to the gut to drive specific and reproducible immune responses through their direct engagement with the immune system, opening an opportunity for safe, effective, proprietary therapeutics that harness natural mechanisms to control immune biology.

Risk Factors

Our business is subject to numerous risks and uncertainties, including those highlighted in the section titled "Risk Factors" immediately following this prospectus summary. Some of these risks are:

- we have a limited operating history, have incurred significant losses since our inception, expect to incur losses for the foreseeable future and may never achieve or maintain profitability;
- even if this offering is successful, we will need additional funding before we can expect to become profitable from the sales of our products, if approved, and if we are unable to raise capital when needed, we could be forced to delay, reduce or discontinue our product development programs or commercialization efforts;
- we are very early in our development efforts and our product candidates, including EDP1066, EDP1815 and EDP1503, may not be successful in clinical trials and, as a result, may never be approved as marketable therapeutics;
- our product candidates are based on monoclonal microbial therapeutics, which is an unproven approach to therapeutic intervention;
- our product candidates are intended to act on the gut-body network, which may not function in humans the way we have observed in mice, and our product candidates may not reproduce the systemic effects we have seen in preclinical data;
- clinical drug development involves a lengthy and expensive process, with an uncertain outcome, and we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates;
- we rely, and expect to continue to rely, on third parties to conduct our clinical trials, for biological materials, including human samples containing microbes, and to manufacture our product candidates for preclinical and clinical testing, and those third parties may not perform satisfactorily, which could delay our product development activities;
- our existing collaborations are important to our business and future licenses may also be important to us, and if we are unable to maintain any of these collaborations, or if these arrangements are not successful, our business could be adversely affected;
- if we are unable to adequately protect our proprietary technology, or obtain and maintain issued patents that are sufficient to protect our product candidates, others could compete against us more directly, which would have a material adverse impact on our business, results of operations, financial condition and prospects; and

- our future success depends on our ability to retain key executives or to attract, retain and motivate qualified personnel.

Implications of Being an Emerging Growth Company

As a company with less than \$1.07 billion in revenue during our last fiscal year, we qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act, or JOBS Act, enacted in April 2012. An “emerging growth company” may take advantage of reduced reporting requirements that are otherwise applicable 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;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these provisions until the last day of our fiscal year following the fifth anniversary of the completion of this offering. However, if any of the following events occur prior to the end of such five-year period, (i) our annual gross revenue exceeds \$1.07 billion, (ii) we issue more than \$1.0 billion of non-convertible debt in any three-year period or (iii) if we become a “large accelerated filer,” we will cease to be an emerging growth company prior to the end of such five-year period. We will be deemed to be a “large accelerated filer” at such time that we (a) have an aggregate worldwide market value of common equity securities held by non-affiliates of \$700 million or more as of the last business day of our most recently completed second fiscal quarter, (b) have been required to file annual and quarterly reports under the Securities Exchange Act of 1934, as amended, or the Exchange Act, for a period of at least 12 months and (c) have filed at least one annual report pursuant to the Exchange Act.

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 stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

In addition, 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. We have elected to use the extended transition period for complying with new or revised accounting standards; and as a result of this election, our financial statements may not be comparable to companies that comply with public company effective dates.

Corporate Information

We were incorporated under the laws of the state of Delaware in 2014. Our principal executive offices are located at 620 Memorial Drive, Suite 200, Cambridge, Massachusetts 02139 and our telephone number is (617) 577-0300. Our website address is www.evelobio.com. The information contained in, or accessible through, our website does not constitute a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

The Offering

Common stock offered by us	shares
Common stock to be outstanding after this offering	shares (or shares if the underwriters exercise their over-allotment option to purchase additional shares in full).
Over-allotment option to purchase additional shares	The underwriters have a 30-day option to purchase up to additional shares of our common stock.
Use of proceeds	We estimate that we will receive net proceeds from this offering of approximately \$ million (or \$ million if the underwriters exercise their over-allotment option in full), assuming an initial public offering price of \$ per share, which is the midpoint of the price range set forth on the cover page of the prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We anticipate that we will use the net proceeds of this offering to fund proof of concept clinical trials in our inflammatory diseases programs, to fund proof of concept clinical trials in our oncology programs, to invest in our platform and to advance additional preclinical development activities, and the remainder, if any, to fund working capital and other general corporate purposes. See “Use of Proceeds” beginning on page 57.
Risk factors	See “Risk Factors” beginning on page 10 and the other information included in this prospectus for a discussion of factors you should consider carefully before deciding to invest in our common stock.
Proposed Nasdaq Global Market symbol	“ ”
<p>The number of shares of our common stock to be outstanding after this offering is based on shares of our common stock outstanding as of , 2018, which includes shares of issued but unvested restricted stock subject to repurchase and excludes:</p> <ul style="list-style-type: none"> • shares of common stock issuable upon exercise of stock options outstanding as of , 2018, at a weighted-average exercise price of \$ per share; • shares of common stock issuable upon the exercise of warrants to purchase shares of preferred stock that will become warrants to purchase common stock, at a weighted average exercise price of \$ per share, upon the closing of this offering; • shares of common stock reserved for future issuance under our 2015 Stock Incentive Plan, or the 2015 Plan; • shares of common stock issuable upon the exercise of stock options to be granted in connection with this offering under our 2018 Incentive Award Plan, or the 2018 Plan, which will become effective in connection with this offering, to certain of our directors, executive officers and employees, at an exercise price per share equal to the public offering price in this offering; 	

- additional shares of our common stock reserved for future issuance under the 2018 Plan, as well as shares of our common stock that become available pursuant to provisions in the 2018 Plan that automatically increase the share reserve under the 2018 Plan as described in “Executive and Director Compensation—Incentive Plans—2018 Incentive Award Plan”; and
- shares of our common stock that will become available for future issuance under our 2018 Employee Stock Purchase Plan, or the 2018 ESPP, which will become effective in connection with this offering, as well as shares of our common stock that become available pursuant to provisions in the 2018 ESPP that automatically increase the share reserve under the 2018 ESPP as described in “Executive and Director Compensation—Incentive Plans—2018 Employee Stock Purchase Plan.”

Unless otherwise indicated, this prospectus reflects and assumes the following:

- the sale by us of 14,705,884 shares of Series C preferred stock in February 2018 for gross proceeds of \$47.5 million;
- a -for- stock split of our common stock, which will become effective prior to the effectiveness of the registration statement of which this prospectus forms a part;
- the automatic conversion of all outstanding shares of our preferred stock into an aggregate of shares of our common stock upon the closing of this offering;
- the automatic cashless exercise of an outstanding warrant to purchase shares of common stock, or the Mayo warrant, which, based on an assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, would result in the issuance of shares of our common stock upon the closing of this offering;
- the outstanding warrants to purchase our preferred stock becoming warrants to purchase our common stock upon the closing of this offering;
- no exercise of outstanding options or warrants after , 2018, except for the automatic cashless exercise of the Mayo warrant;
- the filing of our restated certificate of incorporation and the adoption of our amended and restated bylaws, which will occur upon the closing of this offering; and
- no exercise by the underwriters of their over-allotment option to purchase additional shares of our common stock.

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 December 31, 2017 and 2016 and the consolidated balance sheet data as of December 31, 2017 from our audited consolidated financial statements appearing at the end of this prospectus. Our historical results are not necessarily indicative of the results that should be expected in the future.

	Year Ended December 31,	
	2017	2016
	(in thousands, except share and per share amounts)	
Statement of Operations Data:		
Operating expenses:		
Research and development	\$ 19,957	\$ 9,134
General and administrative	7,574	3,891
Total operating expenses	27,531	13,025
Loss from operations	(27,531)	(13,025)
Other (expense) income:		
Interest expense, net	(215)	(287)
Other expenses	(301)	(20)
Other income (expense), net	(516)	(307)
Net loss	(28,047)	(13,332)
Convertible preferred stock dividends	(6,085)	(1,645)
Net loss attributable to common stockholders	\$ (34,132)	\$ (14,977)
Net loss per share attributable to common stockholders, basic and diluted(1)	\$ (2.23)	\$ (1.30)
Weighted average number of common shares outstanding, basic and diluted(1)	15,299,527	11,562,889
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)(2)	\$ (0.36)	
Pro forma weighted average common shares outstanding, basic and diluted (unaudited)(2)	76,717,860	

- (1) See Note 2 to our audited 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.
- (2) See Note 13 to our audited consolidated financial statements appearing at the end of this prospectus for further details on the calculation of our unaudited basic and diluted pro forma net loss per share attributable to common stockholders.

	As of December 31, 2017		
	Actual	Pro Forma(2)	Pro Forma as Adjusted(3)
Consolidated Balance Sheet Data:			
Cash and cash equivalents	\$ 38,246		
Working capital(1)	34,938		
Total assets	43,788		
Long-term debt	9,966		
Preferred stock warrant liability	424		
Convertible preferred stock	83,702		
Accumulated deficit	(56,422)		
Total stockholders' (deficit) equity	(54,723)		

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

(2) The pro forma consolidated balance sheet data give effect to:

- the sale by us of 14,705,884 shares of Series C preferred stock in February 2018 for gross proceeds of \$47.5 million;
- the automatic conversion of all shares of our preferred stock outstanding as of _____, 2018 into an aggregate of _____ shares of our common stock upon the closing of this offering;
- the automatic cashless exercise of an outstanding warrant to purchase _____ shares of common stock, which, based on an assumed initial public offering price of \$ _____ per share, the midpoint of the price range set forth on the cover page of this prospectus, which would result in the issuance of _____ shares of our common stock upon the closing of this offering; and
- the outstanding warrants to purchase our preferred stock becoming warrants to purchase our common stock upon the closing of this offering.

(3) The pro forma as adjusted consolidated balance sheet data give further effect to the sale by us of shares of our common stock in this offering at an assumed initial public offering price of \$ _____ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. A \$1.00 increase or decrease in the assumed initial public offering price of \$ _____ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the pro forma as adjusted amount of each of cash and cash equivalents, working capital, total assets, and total stockholders' (deficit) equity by approximately \$ _____ 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 the estimated underwriting discounts and commissions and estimated offering expenses payable by us. An increase or 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 or decrease each of cash and cash equivalents, working capital, total assets, and total stockholders' (deficit) equity on a pro forma as adjusted basis by approximately \$ _____ million, assuming no change in the assumed initial public offering price per share and after deducting the 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 described below, as well as the other information in this prospectus, including our consolidated financial statements and the related notes and “Management’s Discussion and Analysis of Results of Operations and Financial Condition,” before deciding whether to invest in our common stock. The occurrence of any of the events or developments described below could harm our business, financial condition, results of operations and growth prospects. In such an event, the market price of our common stock could decline, and you may lose all or part of your investment.

Risks Related to Our Financial Position and Need for Additional Capital

We are a development-stage company and have incurred significant losses since our inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.

Since inception, we have incurred significant operating losses. Our net loss was \$28.0 million and \$13.3 million for the years ended December 31, 2017 and 2016, respectively. As of December 31, 2017, we had an accumulated deficit of \$56.4 million. To date, we have financed our operations through private placements of our preferred stock and borrowings under our loan and security agreement with Pacific Western Bank. We have devoted substantially all of our financial resources and efforts to developing our monoclonal microbial platform, identifying potential product candidates and conducting preclinical studies. We are in the early stages of developing our product candidates, and we have not completed the development of any monoclonal microbial therapeutics or other drugs or biologics. We expect to continue to incur significant expenses and operating losses for the foreseeable future. We anticipate that our expenses will increase substantially as we:

- seek to enhance our monoclonal microbial platform and discover and develop additional product candidates;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- seek to establish a sales, marketing and distribution infrastructure and scale-up manufacturing capabilities to commercialize any products for which we may obtain regulatory approval;
- maintain, expand and protect our intellectual property portfolio; and
- add clinical, scientific, operational, financial and management information systems and personnel, including personnel to support our product development and potential future commercialization efforts and to support our transition to a public company.

In addition, we anticipate that our expenses will increase substantially if we experience any delays or encounter any issues with any of the above, including but not limited to failed studies, complex results, safety issues or other regulatory challenges.

To become and remain profitable, we must succeed in developing and eventually commercializing products that generate significant revenue. This will require us to be successful in a range of challenging activities, including completing preclinical testing and clinical trials of our product candidates, discovering additional product candidates, obtaining regulatory approval for these product candidates and manufacturing, marketing and selling any products for which we may obtain regulatory approval. We are only in the preliminary stages of most of these activities. We may never succeed in these activities and, even if we do, may never generate revenue that is significant enough to achieve profitability.

Because of the numerous risks and uncertainties associated with pharmaceutical product and biological 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 profitability. If we are required by the U.S. Food and Drug Administration, or FDA, or the European Medicines Agency, or EMA, or other regulatory authorities to perform preclinical or clinical studies in addition to those currently expected, or if there are any delays in completing our preclinical studies or clinical trials or the development of any of our product candidates, our expenses could increase and revenue could be further delayed.

Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would depress our value and could impair our ability to raise capital, expand our business, maintain our research and development efforts, diversify our product offerings or even continue our operations.

Even if this offering is successful, we will need additional funding in order to complete development of our product candidates and commercialize our products, if approved. If we are unable to raise capital when needed, we could be forced to delay, reduce or discontinue our product development programs or commercialization efforts.

We expect our expenses to increase in connection with our ongoing activities, particularly as we conduct clinical trials, build manufacturing capacity and expand into additional therapeutic areas.

We expect that our existing cash, cash equivalents and investments, together with anticipated net proceeds from this offering, will enable us to fund our operating expenses and capital expenditure requirements through at least . We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect. Our future capital requirements will depend on many factors, including:

- the progress and results of any future clinical trials;
- the cost of manufacturing clinical supplies of our product candidates, including EDP1066, EDP1815 and EDP1503;
- the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials for any other future product candidates;
- the costs, timing and outcome of regulatory review of our product candidates;
- the costs and timing of future commercialization activities, including manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in businesses, products and technologies, including entering into licensing or collaboration arrangements for product candidates, although we currently have no commitments or agreements to complete any such transactions.

Any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our product candidates. In addition, we cannot guarantee that future financing will be available in sufficient amounts or on terms acceptable to us, if at all. Moreover, the terms of any financing may adversely affect the holdings or the rights of our stockholders and the issuance of additional securities, whether equity or debt, by us, or the possibility of such issuance, may cause the market price of our shares to decline. The sale of additional equity or convertible securities would dilute all of

our stockholders. The incurrence of indebtedness could result in increased fixed payment obligations and we may be required to agree to certain restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell, or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. We could also be required to seek funds through arrangements with collaborators or others at an earlier stage than otherwise would be desirable and we may be required to relinquish rights to some of our technologies or product candidates or otherwise agree to terms unfavorable to us, any of which may have a material adverse effect on our business, operating results and prospects.

If we are unable to obtain funding on a timely basis, we may be required to significantly curtail, delay, or discontinue one or more of our research or product development programs or the commercialization of any product candidates. In addition, we may be unable to make milestone and royalty payments due under our intellectual property license agreements or other payments under our agreements with contract research organizations, or CROs, and academic research collaborators, or expand our operations or otherwise capitalize on our business opportunities, as desired, which could materially affect our business, financial condition and results of operations.

Our limited operating history may make it difficult to evaluate the success of our business to date and to assess our future viability.

Since our inception in 2014, we have devoted substantially all of our resources to identifying and developing our product candidates, building our intellectual property portfolio, process development and manufacturing function, planning our business, raising capital and providing general and administrative support for these operations. All of our product candidates are in preclinical development. We intend to commence our first clinical trials of EDP1066 and EDP1815 in _____ and _____, respectively, and our first clinical trial of EDP1503 in _____, but have not completed any clinical trials for these or any other product candidates. We have not yet demonstrated our ability to successfully complete any non-clinical toxicology study, Phase 1 clinical study, Phase 2 clinical study or any Phase 3 or other pivotal clinical trials, obtain regulatory approvals, manufacture a commercial scale product, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. Additionally, we expect our financial condition and operating results to continue to fluctuate significantly from quarter to quarter and year to year due to a variety of factors, many of which are beyond our control.

Consequently, any predictions you make about our future success or viability may not be as accurate as they could be if we had a longer operating history.

The terms of our loan and security agreement place restrictions on our operating and financial flexibility. If we raise additional capital through debt financing, the terms of any new debt could further restrict our ability to operate our business.

We have a \$15.0 million term loan credit facility with Pacific Western Bank, or the loan and security agreement, that is secured by a lien covering substantially all of our personal property, excluding intellectual property. As of December 31, 2017, the outstanding principal balance under the loan and security agreement was \$10.0 million. In February 2018, we drew the additional \$5 million available under the loan and security agreement. The loan and security agreement contains customary affirmative and negative covenants and events of default applicable to us and our subsidiaries.

The affirmative covenants include, among others, covenants requiring us (and us to cause our subsidiaries) to maintain our legal existence and governmental approvals, deliver certain financial reports and notifications, maintain proper books of record and account, timely file and pay tax returns, maintain inventory and insurance coverage, maintain cash with Pacific Western Bank (subject to exceptions) and in accounts subject to control agreements (subject to exceptions), and protect material intellectual property. The negative covenants include, among others, restrictions on us and our subsidiaries transferring collateral, changing businesses, dissolving,

liquidating, engaging in mergers or acquisitions, adding new offices or locations, making certain organizational changes, incurring additional indebtedness, encumbering assets (including a negative pledge on intellectual property), paying cash dividends or making other distributions, making investments, selling assets, making certain capitalized expenditures, undergoing a change in control, and engaging in certain non-ordinary course material transactions with affiliates, in each case subject to certain exceptions. If we default under the loan and security agreement, Pacific Western Bank may accelerate all of our repayment obligations and take control of our pledged assets, potentially requiring us to renegotiate our agreement on terms less favorable to us or to immediately cease operations. Further, if we are liquidated, the lenders' right to repayment would be senior to the rights of the holders of our common stock to receive any proceeds from the liquidation. Pacific Western Bank could declare a default upon the occurrence of any event that they interpret as a material adverse effect as defined under the loan and security agreement, thereby requiring us to repay the loan immediately or to attempt to reverse the declaration of default through negotiation or litigation. Any declaration by the lenders of an event of default could significantly harm our business and prospects and could cause the price of our common stock to decline. If we raise any additional debt financing, the terms of such additional debt could further restrict our operating and financial flexibility.

Risks Related to the Discovery, Development and Regulatory Approval of Our Product Candidates

We are very early in our development efforts and may not be successful in our efforts to use our platform to build a pipeline of product candidates and develop marketable drugs.

We are using our monoclonal microbial platform, with an initial focus on developing therapies in immunology, specifically inflammatory diseases, and also oncology. While we believe our preclinical program to date has validated our platform to a degree, we are at an early stage of development and our platform has not yet, and may never lead to, approvable or marketable products. We are developing these product candidates and additional product candidates that we intend to use to treat broader immunological diseases, respiratory diseases, neuro-inflammation and degeneration, liver diseases, type I diabetes, food allergy, neurobehavior, cardiovascular disease and diseases of metabolism. We may have problems applying our technologies to these other areas, and our new product candidates may not demonstrate a comparable ability in treating disease as our initial product candidates. Even if we are successful in identifying additional product candidates, they may not be suitable for clinical development as a result of our inability to manufacture more complex monoclonal microbes, limited efficacy, unacceptable safety profiles or other characteristics that indicate that they are unlikely to be products that will receive marketing approval and achieve market acceptance. The success of our product candidates will depend on several factors, including the following:

- completion of preclinical studies and clinical trials with positive results;
- receipt of marketing approvals from applicable regulatory authorities;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our product candidates;
- making arrangements with third-party manufacturers for, or establishing our own, commercial manufacturing capabilities;
- launching commercial sales of our products, if and when approved, whether alone or in collaboration with others;
- entering into new collaborations throughout the development process as appropriate, from preclinical studies through to commercialization;
- acceptance of our products, if and when approved, by patients, the medical community and third-party payors;
- effectively competing with other therapies;

- obtaining and maintaining coverage and adequate reimbursement by third-party payors, including government payors, for our products, if approved;
- protecting our rights in our intellectual property portfolio;
- operating without infringing or violating the valid and enforceable patents or other intellectual property of third parties;
- maintaining a continued acceptable safety profile of the products following approval; and
- maintaining and growing an organization of scientists and business people who can develop and commercialize our products and technology.

If we do not successfully develop and commercialize product candidates based upon our technological approach, we will not be able to obtain product revenue in future periods, which likely would result in significant harm to our financial position and adversely affect our stock price.

Our product candidates are intended to act on the gut-body network to produce systemic effects with limited systemic exposure. This biological interaction between the gut and the rest of the body may not function in humans the way we have observed in mice and our drugs may not reproduce the systemic effects we have seen in preclinical data.

We believe our product candidates, including EDP1066, EDP1815 and EDP1503, work by modulating the systemic immune response via the gut-body network. This requires our monoclonal microbials, when dosed, to pass safely through the tissues of the gut, where they can interact with the immune cells in the interior of the gut called the lumen. Dosing to achieve sufficient exposure may require an inconvenient dosing regimen. Even with successful formulation and delivery to achieve proper exposure of our microbes to the gut, we may not get sufficient or even any immune activity at the site of disease. This may be because our understanding of the mechanisms of the gut-body network do not work in humans the way we believe they do. Despite there being strong academic literature to support the concept of the gut-body network and our observations in preclinical studies in mice, these principles and the ability to use the gut-body network through monoclonal microbials to modulate the immune system through the gut-body network has not yet been proven in humans.

Our product candidates are based on monoclonal microbial therapeutics, which is an unproven approach to therapeutic intervention.

All of our product candidates are based on monoclonal microbial therapeutics, an approach that is designed to treat disease by using therapies based on monoclonal microbials. We have not, nor to our knowledge has any other company, received regulatory approval for an oral therapeutic based on this approach. We cannot be certain that our approach will lead to the development of approvable or marketable products. In addition, our monoclonal microbial therapeutics may have different safety profiles and effectiveness rates in various indications. Finally, the FDA or other regulatory agencies may lack experience in evaluating the safety and efficacy of products based on monoclonal microbial, which could result in a longer than expected regulatory review process, increase our expected development costs and delay or prevent commercialization of our product candidates.

Our platform relies on third parties for biological materials to expand our microbial library.

Our monoclonal microbial platform relies on third parties for biological materials, including human samples containing bacteria, to expand our microbial library. Some biological materials have not always met our expectations or requirements, and any disruption in the supply of these biological materials could materially adversely affect our business and ability to build our pipeline of product candidates. For example, if any supplied biological materials are contaminated, we would not be able to use such biological materials. Although we have quality control processes and screening procedures, biological materials are susceptible to damage and contamination. Improper storage of these materials, by us or any third party suppliers, may require us to destroy some of our raw materials or products.

Even if our product candidates do not cause off target adverse events, there may be immunotoxicity associated with the fundamental pharmacology of our product candidates.

Our product candidates, including EDP1066, EDP1815 and EDP1503, are designed to work by modulating the immune system. While we have observed in preclinical studies that our monoclonal microbials have limited systemic exposure, the pharmacological immune effects we induce are systemic. Systemic immunomodulation from taking our monoclonal microbials could lead to immunotoxicity in patients, which may cause us or regulatory authorities to delay, limit or suspend clinical development. Other immunomodulatory agents have shown immunotoxicity, including with immune suppressive agents, such as HUMIRA or REMICADE, have shown an increased risk of infection or in rare instances certain types of blood cancer. In the case of immune activating agents, such as YERVOY, induction of adverse auto-immune events have been observed in some patients. Immunotoxicity in one program could cause regulators to view these adverse events as a class effect of our monoclonal microbials which may impact the timing of the development of our pipeline of potential product candidates. Even if the adverse events are manageable, the profile of the drug may be such that it limits or diminishes the possible number of patients who could receive our therapy.

Our product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any.

Undesirable side effects caused by our product candidates could cause us 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, EMA or comparable foreign regulatory authorities. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics. For example, some of our product candidates may consist of live biological material that may remain viable in humans, which carries a risk of causing infections in patients. Some infections may require treatment with antibiotics to eliminate the monoclonal microbial. All our product candidates are screened for antibiotic sensitivity but it is possible that if antibiotic therapy does not eliminate the live biological material, a resistant version of our strain could remerge. These events, while unlikely, could cause a delay in our clinical development and/or could increase the regulatory standards for the entire class of monoclonal microbials. In an instance where the infection risk of taking our product candidates is high, this may cause the benefit risk profile of therapy to be non-competitive in the market and may lead to discontinuation of development of the product.

In addition, it is possible that infections from our product candidates could be rare and not frequently observed in our clinical trials. In larger post marketing authorization trials, however, data could show that the infection risk, while small, does exist. If unacceptable side effects arise in the development of our product candidates, we, the FDA, EMA or comparable foreign regulatory authorities, the institutional review boards, or IRBs, at the institutions in which our studies are conducted, or ethics committees, or the data safety monitoring board, or DSMB, could suspend or terminate our clinical trials or the FDA, EMA or comparable foreign regulatory authorities could order us to cease clinical trials or deny approval of our product candidates for any or all targeted indications. Treatment-related side effects could also affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff. We expect to have to train medical personnel using our product candidates to understand the side effect profiles for our clinical trials and upon any commercialization of any of our product candidates. Inadequate training in recognizing or managing the potential side effects of our product candidates could result in patient injury or death. Any of these occurrences may harm our business, financial condition and prospects significantly.

If any of our product candidates receives marketing approval, and we or others later identify undesirable side effects caused by such products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw their approval of the product;

- we may be required to recall a product or change the way such product is administered to patients;
- additional restrictions may be imposed on the marketing of the particular product or the manufacturing processes for the product or any component thereof;
- we may be required to conduct post-marketing studies or clinical trials;
- regulatory authorities may require the addition of labeling statements, such as a “black box” warning or a contraindication;
- we may be required to implement a risk evaluation and mitigation strategy or create a medication guide outlining the risks of such side effects for distribution to patients;
- we could be sued and held liable for harm caused to patients;
- the product may become less competitive; and
- our reputation may suffer.

Any of the foregoing events could prevent us from achieving or maintaining market acceptance of the particular product candidate, if approved, and result in the loss of significant revenues to us, which would materially and adversely affect our results of operations and business.

Companies with microbiome products or differing microbial products may produce negative clinical data which will adversely affect public perception of monoclonal microbials, and may negatively impact regulatory approval of, or demand for, our potential products.

Our monoclonal microbial product candidates are pharmaceutical compositions of commensal microbes. While we believe our approach is distinct from microbiome therapies, negative data from clinical trials using microbiome-based therapies (*e.g.*, fecal transplant) and other microbial therapies could negatively impact the perception of the therapeutic use of microbial-based products. This could negatively impact our ability to enroll patients in clinical trials. The clinical and commercial success of our potential products will depend in part on the public and clinical communities’ acceptance of the use of monoclonal microbials. Moreover, our success depends upon physicians prescribing, and their patients being willing to receive, treatments that involve the use of product candidates we may develop in lieu of, or in addition to, existing treatments with which they are already familiar and for which greater clinical data may be available.

Adverse events in our preclinical studies or clinical trials or those of our competitors or of academic researchers utilizing monoclonal microbial technologies, even if not ultimately attributable to our product candidates, and the resulting publicity could result in increased governmental regulation, unfavorable public perception, potential regulatory delays in the testing or approval of our potential product candidates, stricter labeling requirements for our product candidates that are approved, if any, and a decrease in demand for any such product candidates.

Catastrophic loss of our master cell banks could significantly impair our ability to manufacture our products.

Our monoclonal microbial product candidates require that we manufacture from master cell banks, or MCBs, of our microbial strains. There is a possibility of a catastrophic failure or destruction of our MCBs. This could make it impossible for us to continue to manufacture a specific product. Recreating and recertifying our MCBs is possible but not certain and could put at risk the supply of our product candidates for preclinical studies or clinical trials or any approved product candidates to our customers.

Clinical drug development involves a lengthy and expensive process, with an uncertain outcome. We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

We expect to dose our first patients in clinical trial of our product candidates, EDP1066, EDP1815 and EDP1503, in _____, _____ and _____, respectively. All of our product candidates are currently in preclinical development. It is impossible to predict when or if any of our product candidates will prove effective and safe in humans or will receive regulatory approval, and the risk of failure through the product development process is high. Before obtaining marketing approval from regulatory authorities for the sale of any product candidate, we must complete preclinical development and then conduct extensive clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Clinical testing is expensive, difficult to design and implement, can take many years to complete and is uncertain as to outcome. A failed clinical trial can occur at any stage of testing. The outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results. For example, in our clinical trial of EDP1066, the drug product will be a capsule coated for targeted release in the gut. This formulation has not previously been clinically tested, nor are we able to dose mice with a capsule coated for targeted release in the gut. The planned clinical trial of EDP1066 is the first clinical trial using this formulation and we cannot assure you that the results of this formulation will be consistent with the observations from our preclinical studies. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in advanced clinical trials due to adverse safety profiles or lack of efficacy, notwithstanding promising results in earlier studies, and we cannot be certain that we will not face similar setbacks.

In addition, we cannot be certain as to the type and number of clinical trials the FDA will require us to conduct before we may successfully gain approval, referred to as licensure in the United States, to market any of our product candidates. Prior to approving a new therapeutic product, the FDA generally requires that efficacy be demonstrated in two adequate and well-controlled clinical trials. In some situations, evidence from a Phase 2 trial and a Phase 3 trial or from a single Phase 3 trial can be sufficient for FDA approval, such as in cases where the trial or trials provide highly reliable and statistically strong evidence of an important clinical benefit. Additionally, FDA requires that investigation include adequate tests to demonstrate the safety of the new therapeutic product. Additional clinical trials could cause us to incur significant development costs, delay or prevent the commercialization of our products or otherwise adversely affect our business.

We may 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, IRBs or ethics committees may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- we may experience delays in reaching, or fail to reach, agreement on acceptable clinical trial contracts or clinical trial protocols with prospective trial sites;
- clinical trials of our product candidates may demonstrate undesirable side effects or produce negative or inconclusive results, 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 at a higher rate than we anticipate;
- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- we may have to, or regulators, IRB or ethics committees may require that we or our investigators, suspend or terminate clinical trials of our product candidates for various reasons, including noncompliance with regulatory requirements or a finding that the participants are being exposed to unacceptable health risks;

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- the cost of clinical trials of our product candidates may be greater than we anticipate;
- 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;
- regulators may revise the requirements for approving our product candidates, or such requirements may not be as we anticipate; and
- regarding trials managed by any future collaborators, our collaborators may face any of the above issues, and may conduct clinical trials in ways they view as advantageous to them but potentially suboptimal for us.

If we are required to conduct additional clinical trials or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical trials of our product candidates or other testing, if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we may:

- be delayed in obtaining marketing approval for our product candidates;
- lose the support of any future collaborators, requiring us to bear more of the burden of developing certain microbial strains;
- not obtain marketing approval at all;
- obtain marketing approval in some countries and not in others;
- obtain approval for indications or patient populations that are not as broad as we intend or desire;
- obtain approval with labeling that includes significant use or distribution restrictions or safety warnings;
- be subject to additional post-marketing testing requirements; or
- have the product removed from the market after obtaining marketing approval.

Our product development costs will increase if we experience delays in clinical testing or marketing approvals. We do not know whether any of our preclinical studies or clinical trials will begin as planned, will need to be restructured or will be completed on schedule, or at all. Significant preclinical or clinical trial delays 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, potentially impairing our ability to successfully commercialize our product candidates and harming our business and results of operations.

If we experience delays or difficulties in the enrollment of patients in clinical trials, our receipt of necessary regulatory approvals could be delayed or prevented.

We may not be able to initiate or continue clinical trials for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or similar regulatory authorities outside the United States, such as the EMA. We are developing our product candidates, EDP1066 and EDP1815, to treat psoriasis and atopic dermatitis, and EDP1503 for melanoma. There are a limited number of patients from which to draw for clinical studies.

Patient enrollment is also affected by other factors including:

- the severity of the disease under investigation;
- the patient eligibility criteria for the study in question;
- the perceived risks and benefits of the product candidate under study;
- the availability of other treatments for the disease under investigation;

- the existence of competing clinical trials;
- the efforts to facilitate timely enrollment in clinical trials;
- our payments for conducting clinical trials;
- the patient referral practices of physicians;
- the ability to monitor patients adequately during and after treatment; and
- the proximity and availability of clinical trial sites for prospective patients.

Our inability to enroll a sufficient number of patients or volunteers for our clinical trials would result in significant delays and could require us to abandon one or more clinical trials altogether. Enrollment delays in our clinical trials may result in increased development costs for our product candidates, which would cause the value of our company to decline and limit our ability to obtain additional financing.

If we are not able to obtain, or if there are delays in obtaining, required regulatory approvals, we will not be able to commercialize our product candidates or will not be able to do so as soon as anticipated, and our ability to generate revenue will be materially impaired.

Our product candidates and the activities associated with their development and commercialization, including their design, testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale and distribution, are subject to comprehensive regulation by the FDA and other regulatory agencies in the United States and by the EMA and similar regulatory authorities outside the United States. Failure to obtain marketing approval for a product candidate in any jurisdiction will prevent us from commercializing the product candidate in that jurisdiction, and may affect our plans for commercialization in other jurisdictions as well. We have not received approval to market any of our product candidates from regulatory authorities in any jurisdiction. We have only limited experience in filing and supporting the applications necessary to gain marketing approvals and expect to rely on third parties to assist us in this process.

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 to such regulatory authorities' satisfaction. Securing marketing approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the regulatory authorities. Our product candidates may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use.

The process of obtaining marketing approvals, both in the United States and abroad, is expensive and may take many years. The scope and amount of clinical data required to obtain marketing approvals can vary substantially from jurisdiction to jurisdiction, and it may be difficult to predict whether a particular regulatory body will require additional or different studies than those conducted by a sponsor, especially for novel product candidates such as our monoclonal microbial therapeutics. The FDA, EMA or other foreign regulatory authorities may delay, limit, or deny the approval of our product candidates for many reasons, including: our inability to demonstrate that the clinical benefits of our product candidates outweigh any safety or other perceived risks; the regulatory authority's disagreement with the interpretation of data from nonclinical or clinical studies; the regulatory agency's requirement that we conduct additional preclinical studies and clinical trials; changes in marketing approval policies during the development period; changes in or the enactment of additional statutes or regulations, or changes in regulatory review process for each submitted product application; or the regulatory authority's failure to approve the manufacturing processes or third-party manufacturers with which we contract. Regulatory authorities have substantial discretion in the approval process and may refuse to accept a marketing application as deficient. In addition, varying interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent marketing approval of a product candidate. Any marketing approval we

ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the approved product not commercially viable. Of the large number of drugs in development, only a small percentage successfully complete the FDA, EMA or other regulatory approval processes and are commercialized.

Furthermore, our product candidates may not receive marketing approval even if they achieve their specified endpoints in clinical trials. Clinical data are often susceptible to varying interpretations and many companies that have believed that their products performed satisfactorily in clinical trials have nonetheless failed to obtain FDA, EMA or the applicable foreign regulatory agency approval for their products. The FDA, EMA or foreign regulatory authorities may disagree with our trial design and our interpretation of data from nonclinical and clinical studies. Upon the review of data from any pivotal trial, the FDA, EMA or applicable foreign regulatory agency it may request that the sponsor conduct additional analyses of the data and, if it believes the data are not satisfactory, could advise the sponsor to delay filing a marketing application.

Even if we eventually complete clinical testing and receive approval of a biologics license application, or BLA, or foreign marketing authorization for one of our product candidates, the FDA, EMA or applicable foreign regulatory agency may grant approval contingent on the performance of costly additional clinical trials which may be required after approval. The FDA, EMA or the applicable foreign regulatory agency may also approve our products for a more limited indication and/or a narrower patient population than we originally request, and the FDA, EMA or applicable foreign regulatory agency, may not approve the labeling that we believe is necessary or desirable for the successful commercialization of our products. Any delay in obtaining, or inability to obtain, applicable regulatory approval would delay or prevent commercialization of our product candidates and would materially adversely impact our business and prospects.

The development of therapeutic products targeting the underlying biology of the human microbiome is an emerging field, and it is possible that the FDA, EMA or other regulatory authorities could issue regulations or new policies in the future affecting our monoclonal microbial therapeutics that could adversely affect our product candidates.

If we experience delays in obtaining approval or if we fail to obtain approval of our product candidates, the commercial prospects for our product candidates may be harmed and our ability to generate revenues will be materially impaired.

We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we intend to focus on developing product candidates for multiple initial indications that we identify as most likely to succeed, in terms of both regulatory approval and commercialization. As a result, we may forego or delay pursuit of opportunities with other product candidates or for other indications that may prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and product development programs and product candidates for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements, in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

A fast track designation by the FDA may not actually lead to a faster development or regulatory review or approval process.

We may seek fast track designation for some of our product candidates. If a drug or biologic is intended for the treatment of a serious or life-threatening condition and nonclinical or clinical data demonstrate the potential

to address unmet medical needs for this condition, the drug or biologic sponsor may apply for FDA fast track designation. Fast track designation provides increased opportunities for sponsor meetings with the FDA during preclinical and clinical development, in addition to the potential for rolling review once a marketing application is filed. The FDA has broad discretion whether or not to grant this designation, and even if we believe a particular product candidate is eligible for this designation, we cannot assure you that the FDA would decide to grant it. Even if we do receive fast track designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures. Fast track designation does not assure ultimate approval by the FDA. The FDA may withdraw fast track designation if it believes that the designation is no longer supported by data from our product development program.

A breakthrough therapy designation by the FDA for our product candidates may not lead to a faster development or regulatory review or approval process, and it does not increase the likelihood that our product candidates will receive marketing approval.

We may seek a breakthrough therapy designation for our product candidates. A breakthrough therapy is defined as a drug or biologic that is intended to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug or biologic may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints. For drugs that have been designated as breakthrough therapies, interaction and communication between the FDA and the sponsor can help to identify the most efficient path for clinical development. Drugs designated as breakthrough therapies by the FDA may also be eligible for accelerated approval.

Designation as a breakthrough therapy is within the discretion of the FDA. Accordingly, even if we believe one of our product candidates meets the criteria for designation as a breakthrough therapy, the FDA may disagree and instead determine not to make such designation. In any event, the receipt of a breakthrough therapy designation for a product candidate may not result in a faster development process, review or approval compared to conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of our product candidates qualify as breakthrough therapies, the FDA may later decide that the products no longer meet the conditions for qualification and rescind the designation.

We may seek orphan drug designation for some of our product candidates, but may not be able to obtain it.

Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs and biologics for relatively small patient populations as orphan drugs. In the United States, the FDA may designate a drug or biologic as an orphan drug if it is intended to treat a rare disease or condition, which is defined as a disease or condition that affects fewer than 200,000 individuals in the United States, or if it affects more than 200,000 individuals in the United States, there is no reasonable expectation that the cost of developing and making the product available in the United States for the disease or condition will be recovered from sales of the product.

Generally, if a product with an orphan drug designation subsequently receives the first marketing approval for the indication for which it has such designation, the product is entitled to a period of marketing exclusivity, which precludes the EMA or the FDA from approving another marketing application for the same drug or biologic for that time period. The applicable period is seven years in the United States and ten years in Europe. The European exclusivity period can be reduced to six years if a product no longer meets the criteria for orphan drug designation or if the product is sufficiently profitable so that market exclusivity is no longer justified.

We may seek orphan drug designation and exclusivity for some of our product candidates. However, even if we obtain orphan drug designation for a product candidate, we may not be able to obtain or maintain orphan drug exclusivity for that product candidate. Orphan drug exclusivity may be lost if the FDA or EMA determines that the request for designation was materially defective or if we are unable to assure sufficient quantity of the drug or

biologic to meet the needs of patients with the rare disease or condition. We also may not be the first to obtain marketing approval of any product candidate for which we have obtained orphan drug designation for the orphan-designated indication due to the uncertainties associated with developing pharmaceutical products.

In addition, exclusive marketing rights in the United States may be limited if we seek approval for an indication broader than the orphan-designated indication or may be lost if the FDA later determines that the request for designation was materially defective or if we are unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition. Further, even if we obtain orphan drug exclusivity for a product, that exclusivity may not effectively protect the product from competition because different drugs with different active moieties may be approved for the same condition. Even after an orphan drug is approved, the FDA can subsequently approve the same drug with the same active moiety for the same condition if the FDA concludes that the later drug is clinically superior in that it is shown to be safer, more effective or makes a major contribution to patient care or if the manufacturer of the product with orphan exclusivity is unable to maintain sufficient product quantity. Orphan drug designation neither shortens the development time or regulatory review time of a drug nor gives the drug any advantage in the regulatory review or approval process.

Risks Related to our Dependence on Third Parties and Manufacturing

We rely, and expect to continue to rely, on third parties to conduct our clinical trials, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials.

We rely, and expect to continue to rely, on third parties, such as contract research organizations, or CROs, clinical data management organizations, medical institutions, clinical investigators and potential pharmaceutical partners, to conduct and manage our clinical trials, including our anticipated clinical trials of EDP1066, EDP1815 and EDP1503.

Our reliance on these third parties for research and development activities will reduce our control over these activities but does not relieve us of our responsibilities. For example, we remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with regulatory standards, commonly referred to as good clinical practices, 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, safety and welfare of trial participants are protected. Other countries' regulatory agencies also have requirements for clinical trials with which we must comply. We also may be required in certain instances to register ongoing clinical trials and post the results of completed clinical trials on government-sponsored databases, such as *ClinicalTrials.gov*, within specified timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, do not meet expected deadlines, experience work stoppages, terminate their agreements with us or need to be replaced, or do not conduct our clinical trials in accordance with regulatory requirements or our stated protocols, we may need to enter into new arrangements with alternative third parties, which could be difficult, costly or impossible, and our clinical trials may be extended, delayed, or terminated or may need to be repeated. If any of the foregoing occur, we may not be able to obtain, or may be delayed in obtaining, marketing approvals for our product candidates and may not be able to, or may be delayed in our efforts to, successfully commercialize our product candidates.

We also expect to rely on other third parties to store and distribute drug product required by our clinical trials. Any performance failure on the part of our distributors could delay clinical development or marketing approval of our product candidates or commercialization of our products, producing additional losses and depriving us of potential product revenue.

We rely on third parties for the manufacture of our product candidates for preclinical and clinical testing and expect to continue to do so for the foreseeable future. This reliance on third parties increases the risk that we will not have sufficient quantities of our product candidates or that such quantities may not be available at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.

We rely, and expect to continue to rely, on third parties for the manufacture of our product candidates for preclinical and clinical testing, as well as for commercial manufacture if any of our product candidates receive marketing approval.

This reliance on third parties increases the risk that we will not have sufficient quantities of our product candidates on a timely basis or at all, or that such quantities will be available at an acceptable cost or quality, which could delay, prevent or impair our development or commercialization efforts.

We may be unable to establish any agreements with third-party manufacturers on acceptable terms or at all. Even if we are able to establish agreements with third-party manufacturers, reliance on third-party manufacturers entails additional risks, including:

- failure of third-party manufacturers to comply with regulatory requirements and maintain quality assurance;
- breach of manufacturing agreements by the third-party manufacturers;
- failure to manufacture our product according to our specifications;
- failure to manufacture our product according to our schedule or at all;
- misappropriation or disclosure of our proprietary information, including our trade secrets and know-how; and
- termination or nonrenewal of agreements by third-party manufacturers at times that are costly or inconvenient for us.

Third-party manufacturers may not be able to comply with current Good Manufacturing Practices, or cGMP, regulations or similar regulatory requirements outside the United States. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocations, seizures or recalls of product candidates or products, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our products. The contract manufacturers we rely on to produce our product candidates have never produced a FDA-approved therapeutic. If our contract manufacturers are unable to comply with cGMP regulation or if the FDA does not approve their facility upon a pre-approval inspection, our product candidates may not be approved or may be delayed in obtaining approval. In addition, there are a limited number of manufacturers that operate under cGMP regulations and that might be capable of manufacturing our products. Therefore, our product candidates and any future product candidates that we may develop may compete with other products for access to manufacturing facilities. Any failure to gain access to these limited manufacturing facilities could severely impact the clinical development, marketing approval and commercialization of our product candidates.

Any performance failure on the part of our existing or future manufacturers could delay clinical development or marketing approval. We do not currently have arrangements in place for redundant supply or a second source for required raw materials used in the manufacture of our product candidates or for the manufacture of finished product. If our current contract manufacturers cannot perform as agreed, we may be required to replace such manufacturers and we may be unable to replace them on a timely basis or at all. Our current and anticipated future dependence upon others for the manufacture of our product candidates or products could delay, prevent or impair our development and commercialization efforts.

We have no experience manufacturing our product candidates at commercial scale, and if we decide to establish our own manufacturing facility, we cannot assure you that we can manufacture our product candidates in compliance with regulations at a cost or in quantities necessary to make them commercially viable.

We may establish a manufacturing facility for our product candidates for production at a commercial scale. We have no experience in commercial-scale manufacturing of our product candidates. We currently intend to develop our manufacturing capacity in part by expanding our current facility or building additional facilities. This activity will require substantial additional funds and we would need to hire and train a significant number of qualified employees to staff these facilities. We may not be able to develop commercial-scale manufacturing facilities that are adequate to produce materials for additional later-stage clinical trials or commercial use.

The equipment and facilities employed in the manufacture of pharmaceuticals are subject to stringent qualification requirements by regulatory agencies, including validation of facility, equipment, systems, processes and analytics. We may be subject to lengthy delays and expense in conducting validation studies, if we can meet the requirements at all.

Risks Related to Commercialization of Our Product Candidates and Other Legal Compliance Matters

Even if any of our product candidates receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, hospitals, third-party payors and others in the medical community necessary for commercial success.

If any of our product candidates receives marketing approval, it may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community. For example, current psoriasis treatment involves the use of steroids and biologics that are well established in the medical community, and physicians may continue to rely on these treatments. If our product candidates receive approval but do not achieve an adequate level of acceptance, we may not generate significant product revenue and we may not become profitable. The degree of market acceptance of our approved product candidates, if any, will depend on a number of factors, including:

- their efficacy, safety and other potential advantages compared to alternative treatments;
- the clinical indications for which our products are approved;
- our ability to offer them for sale at competitive prices;
- their convenience and ease of administration compared to alternative treatments;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the strength of marketing and distribution support;
- the availability of third-party coverage and adequate reimbursement for our product candidates;
- the prevalence and severity of their side effects and their overall safety profiles;
- any restrictions on the use of our products together with other medications;
- interactions of our products with other medicines patients are taking; and
- inability of certain types of patients to take our product.

We currently have no sales organization. If we are unable to establish effective sales, marketing and distribution capabilities or enter into agreements with third parties with such capabilities, we may not be successful in commercializing our product candidates if and when they are approved.

We do not have a sales or marketing infrastructure and have no experience in the sale, marketing or distribution of our product candidates. To achieve commercial success for any product for which we obtain marketing approval, we will need to establish a sales and marketing organization or make arrangements with third parties to perform sales and marketing functions and we may not be successful in doing so.

In the future, we expect to build a focused sales and marketing infrastructure to market or promote our product candidates in the United States and potentially elsewhere, if and when they are approved. There are risks involved with establishing our own sales, marketing and distribution capabilities. For example, recruiting and training a sales force is expensive and time consuming and could delay any product launch. If the commercial launch of a product candidate for which we recruit a sales force and establish marketing capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel.

Factors that may inhibit our efforts to commercialize our products on our own include:

- our inability to recruit, train and retain an adequate number of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to or educate physicians on the benefits of our products;
- 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;
- unforeseen costs and expenses associated with creating an independent sales and marketing organization; and
- inability to obtain sufficient coverage and reimbursement from third-party payors and governmental agencies.

Outside the United States, we may rely on third parties to sell, market and distribute our product candidates. We may not be successful in entering into arrangements with such third parties or may be unable to do so on terms that are favorable to us. In addition, our product revenue and our profitability, if any, may be lower if we rely on third parties for these functions than if we were to market, sell and distribute any products that we develop ourselves. We likely will have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively. If we do not establish sales, marketing and distribution capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates.

We face substantial competition, which may result in others discovering, developing or commercializing competing products before or more successfully than we do.

The development and commercialization of new drug and biologic products is highly competitive and is characterized by rapid and substantial technological development and product innovations. We face competition with respect to our current product candidates, and will face competition with respect to product candidates that we may seek to develop or commercialize in the future, from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. We are aware of a number of large pharmaceutical and biotechnology companies, including AbbVie Inc., Agenesis Inc., AstraZeneca plc, Bristol-Myers Squibb, Celgene Corporation, F. Hoffmann-La Roche A.G., Gilead Sciences, Inc., Incyte Corporation, Johnson & Johnson, Juno Therapeutics Inc., Merck & Co., Novartis International A.G., Pfizer Inc. and Regeneron Pharmaceuticals, Inc., as well as smaller, early-stage companies, that are pursuing the development of

products, including microbial-based therapeutics, for disease indications we are targeting. Some of these competitive products and therapies are based on scientific approaches that are the same as or similar to our approach, and others may be based on entirely different approaches. Potential competitors also include academic institutions, government agencies and other public and private research organizations.

Many of the companies against which we are competing or against which we may compete in the future have significantly greater financial resources, established presence in the market and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and reimbursement and marketing approved products than we do. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors.

These third parties compete with us in recruiting and retaining qualified scientific, sales and marketing and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may obtain FDA or other regulatory 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, especially for any competitor developing a microbial therapeutic which will likely share our same regulatory approval requirements. In addition, our ability to compete may be affected in many cases by insurers or other third-party payors seeking to encourage the use of generic or biosimilar products.

Even if we are able to commercialize any product candidates, the products may become subject to unfavorable pricing regulations or third-party coverage and reimbursement policies, any of which could harm our business.

Our ability to commercialize any product candidates successfully 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. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which medications they will pay for and impact reimbursement levels.

Obtaining and maintaining adequate reimbursement for our products may be difficult. We cannot be certain if and when we will obtain an adequate level of reimbursement for our products by third-party payors. Even if we do obtain adequate levels of reimbursement, third-party payors, such as government or private healthcare insurers, carefully review and increasingly question the coverage of, and challenge the prices charged for, drugs. Reimbursement rates from private health insurance companies vary depending on the company, the insurance plan and other factors. A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Government authorities and third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for drugs. We may also be required to conduct expensive pharmacoeconomic studies to justify coverage and reimbursement or the level of reimbursement relative to other therapies. If coverage and reimbursement are not available or reimbursement is available only to limited levels, we may not be able to successfully commercialize any product candidate for which we obtain marketing approval, and the royalties resulting from the sales of those products may also be adversely impacted.

There may be significant delays in obtaining reimbursement for newly approved drugs, and coverage may be more limited than the purposes for which the drug is approved by the FDA or similar regulatory authorities

outside the United States. Moreover, eligibility for reimbursement does not imply that a drug 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 drugs, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Reimbursement rates may vary according to the use of the drug and the clinical setting in which it is used, may be based on reimbursement levels already set for lower cost drugs and may be incorporated into existing payments for other services. Net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Our inability to promptly obtain coverage and adequate reimbursement rates from both government-funded and private payors for any approved products that we develop could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize products and our overall financial condition.

The regulations that govern marketing approvals, pricing, coverage and reimbursement for new drug 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 drug before it can be reimbursed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, prescription drug pricing remains subject to continuing governmental control, including possible price reductions, 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 our commercial launch of the product, possibly for lengthy time periods, and 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 investment in one or more product candidates, even if our product candidates obtain marketing approval. There can be no assurance that our product candidates, if they are approved for sale in the United States or in other countries, will be considered medically necessary for a specific indication or cost-effective, or that coverage or an adequate level of reimbursement will be available.

Product liability lawsuits against us could cause us to incur substantial liabilities and limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the testing of our product candidates in clinical trials and will face an even greater risk if we commercially sell any products that we develop. If we cannot successfully defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- regulatory investigations, product recalls or withdrawals, or labeling, marketing or promotional restrictions;
- decreased demand for any product candidates or products that we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- significant costs to defend the related litigation;
- substantial monetary awards to trial participants or patients;
- loss of revenue;
- reduced resources of our management to pursue our business strategy; and
- the inability to commercialize any products that we may develop.

Our current product liability insurance coverage and any product liability insurance coverage that we acquire in the future may not be adequate to cover all liabilities that we may incur. We may need to increase our

insurance coverage as we expand our clinical trials or if we commence commercialization of our product candidates. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

We may face competition from biosimilars, which may have a material adverse impact on the future commercial prospects of our product candidates.

Even if we are successful in achieving regulatory approval to commercialize a product candidate faster than our competitors, we may face competition from biosimilars. In the United States, the Biologics Price Competition and Innovation Act, or BPCIA, enacted in 2010 as part of the Patient Protection and Affordable Care Act, created an abbreviated approval pathway for biological products that are demonstrated to be “highly similar,” or biosimilar, to or “interchangeable” with an FDA-approved biological product. This pathway could allow competitors to reference data from innovative biological products 12 years after the time of approval of the innovative biological product. This data exclusivity does not prevent another company from developing a product that is highly similar to the innovative product, generating its own data and seeking approval. Data exclusivity only assures that another company cannot rely upon the data within the innovator’s application to support the biosimilar product’s approval. We believe that any of our product candidates approved as a biological product under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to Congressional action or otherwise, or that the FDA will not consider our product candidates to be reference products for competing products, potentially creating the opportunity for generic competition sooner than anticipated. It is possible that Congress or the FDA may take these or other measures to reduce or eliminate periods of exclusivity. The BPCIA is complex and continues to be interpreted and implemented by the FDA. As a result, its ultimate impact remains subject to uncertainty, which could have a material adverse effect on the future commercial prospects for our product candidates.

In Europe, the European Commission has granted marketing authorizations for biosimilars pursuant to a set of general and product class-specific guidelines for biosimilar approvals issued over the past few years. In Europe, a competitor may reference data supporting approval of an innovative biological product, but will not be able to get on the market until 10 years after the time of approval of the innovative product. This 10-year marketing exclusivity period will be extended to 11 years if, during the first eight of those 10 years, the marketing authorization holder obtains an approval for one or more new therapeutic indications that bring significant clinical benefits compared with existing therapies. In addition, companies may be developing biosimilars in other countries that could compete with our products. If competitors are able to obtain marketing approval for biosimilars referencing our products, our products may become subject to competition from such biosimilars, with the attendant competitive pressure and consequences.

Failure to obtain marketing approval in international jurisdictions would prevent our product candidates from being marketed abroad.

In order to market and sell our product candidates in the European Union and many other jurisdictions, we or our collaborators must obtain separate marketing approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval in foreign countries may differ substantially from that required to obtain FDA, EMA or other applicable regulatory approval. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries. The regulatory approval process outside the United States generally includes all of the risks associated with obtaining FDA, EMA or other applicable regulatory approval. In addition, in many countries outside the United States, it is required that the product be approved for reimbursement before the product can be approved for sale in that country. We or our collaborators may not obtain approvals for our product candidates from regulatory authorities outside the United States on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one regulatory authority outside the United States does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. However, a failure or delay in obtaining

regulatory approval in one country may have a negative effect on the regulatory process in others. We may not be able to file for marketing approvals and may not receive necessary approvals to commercialize our products in any market.

Any product candidate for which we obtain marketing approval could be subject to post-marketing restrictions or withdrawal from the market, and we may be subject to penalties if we fail to comply with regulatory requirements or if we experience unanticipated problems with our products, when and if any of them are approved.

Any product candidate for which we obtain marketing approval, along with the manufacturing processes, post-approval clinical data, labeling, advertising and promotional activities for such product, will be subject to the continual requirements of and review by the FDA and other regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, registration and listing requirements, cGMP requirements relating to manufacturing, quality control, quality assurance and corresponding maintenance of records and documents, requirements regarding the distribution of samples to physicians and recordkeeping. We and our contract manufacturers will also be subject to continual review and periodic inspections to assess compliance with cGMP. Accordingly, we and others with whom we work must continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production and quality control.

Even if marketing approval of a product candidate is granted, the approval may be subject to limitations on the indicated uses for which the product may be marketed or to specific conditions of approval, including a requirement to implement a risk evaluation and mitigation strategy, which could include requirements for a medication guide, communication plan, or restricted distribution system. If any of our product candidates receives marketing approval, the accompanying label may limit the approved use of our drug, which could limit sales of the product.

The FDA may also impose requirements for costly post-marketing studies or clinical trials and surveillance to monitor the safety or efficacy of our approved products. The FDA closely regulates the post-approval marketing and promotion of drugs and biologics to ensure they are marketed only for the approved indications and in accordance with the provisions of the approved labeling. The FDA imposes stringent restrictions on manufacturers' communications regarding off-label use, and if we market our products outside of their approved indications, we may be subject to enforcement action for off-label marketing. Violations of the FDA's restrictions relating to the promotion of prescription drugs may also lead to investigations alleging violations of federal and state health care fraud and abuse laws, as well as state consumer protection laws.

In addition, if a regulatory agency or we later discover previously unknown problems with our products, such as adverse events of unanticipated severity or frequency, problems with manufacturers or manufacturing processes, or failure to comply with regulatory requirements, the regulatory agency may impose restrictions on the products or us, including requiring withdrawal of the product from the market. Any failure to comply with applicable regulatory requirements may yield various results, including:

- litigation involving patients taking our products;
- restrictions on such products, manufacturers or manufacturing processes;
- restrictions on the labeling or marketing of a product;
- restrictions on product distribution or use;
- requirements to conduct post-marketing studies or clinical trials;
- warning letters;
- withdrawal of products from the market;

- suspension or termination of ongoing clinical trials;
- refusal to approve pending applications or supplements to approved applications that we submit;
- recall of products;
- fines, restitution or disgorgement of profits or revenues;
- suspension or withdrawal of marketing approvals;
- damage to relationships with potential collaborators;
- unfavorable press coverage and damage to our reputation;
- refusal to permit the import or export of our products;
- product seizure or detention;
- injunctions; or
- imposition of civil or criminal penalties.

Noncompliance with similar European Union requirements regarding safety monitoring or pharmacovigilance can also result in significant financial penalties. Similarly, failure to comply with U.S. and foreign regulatory requirements regarding the development of products for pediatric populations and the protection of personal health information can also lead to significant penalties and sanctions.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. In addition, the FDA's regulations, policies or guidance may change and new or additional statutes or government regulations may be enacted that could prevent or delay regulatory approval of our product candidates or further restrict or regulate post-approval activities. For example, in December 2016, the 21st Century Cures Act was signed into law, which is intended, among other things, to modernize the regulation of biologics and to spur innovation, though its ultimate implementation remains unclear. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize and generate revenues. If regulatory sanctions are applied or if regulatory approval is withheld or withdrawn, the value of our company and our operating results will be adversely affected.

We also cannot predict the likelihood, nature or extent of adverse government regulation that may arise from pending or future legislation or administrative action, either in the United States or abroad. For example, certain policies of the current presidential administration may impact our business and industry. Namely, the current presidential administration has taken several executive actions, including the issuance of a number of Executive Orders, that could impose significant burdens on, or otherwise materially delay, FDA's ability to engage in routine regulatory and oversight activities such as implementing statutes through rulemaking, issuance of guidance, and review and approval of marketing applications. It is difficult to predict how these requirements will be implemented, and the extent to which they will impact the FDA's ability to exercise its regulatory authority. If these executive actions impose constraints on FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted.

Our relationships with customers, physicians and third-party payors will be subject to applicable anti-kickback, fraud and abuse and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, exclusion from governmental healthcare programs, contractual damages, reputational harm and diminished profits and future earnings.

Healthcare providers, physicians and third-party payors will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our future arrangements with third-party payors, physicians and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may restrict the business or financial arrangements and relationships through

which we market, sell and distribute any products for which we obtain marketing approval. Restrictions under applicable federal and state healthcare laws and regulations include the following:

- the federal Anti-Kickback Statute prohibits, among other things, persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under a federal healthcare program, such as Medicare and Medicaid; a person or entity does not need to have actual knowledge of the statute or specific intent to violate it to have committed a violation. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act (described below);
- the false claims and civil monetary penalties laws, including the federal False Claims Act, which, among other things, impose criminal and civil penalties, including through civil whistleblower or qui tam actions, against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent, knowingly making, using or causing to be made or used, a false record or statement material to a false or fraudulent claim or from knowingly or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, imposes criminal and civil liability for executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters; similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of these statutes or specific intent to violate them to have committed a violation;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act and its implementing regulations, also imposes obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information;
- the federal Physician Payment Sunshine Act requires applicable manufacturers of covered drugs to report payments and other transfers of value to physicians and teaching hospitals, and ownership and investment interests held by physicians and their immediate family members; manufacturers are required to submit subsequent reports to the government by the 90th day of each calendar year;
- analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, may apply to our business practices, including but not limited to, research, distribution, sales or marketing arrangements and claims involving healthcare items or services reimbursed by non- governmental third-party payors, including private insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government and may require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers, pricing information or marketing expenditures; and
- state and foreign laws that govern the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

The risk of our being found in violation of these laws is increased by the fact that many of them have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. 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. The shifting compliance environment and the need to build and maintain a robust system to comply with multiple jurisdictions with different compliance and reporting requirements increases the possibility that a healthcare company may violate one or more of the requirements.

Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental laws and regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, imprisonment, exclusion from government funded healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations.

Recently enacted and future legislation may increase the difficulty and cost for us to obtain marketing approval for and commercialize our product candidates and affect the prices we may obtain.

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 product candidates for which we obtain marketing approval.

In the United States, President Obama signed into law the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act, or collectively the Affordable Care Act, a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for the healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms.

Among the provisions of the Affordable Care Act that are of importance to our potential product candidates are the following:

- establishment of a new pathway for approval of lower-cost biosimilars to compete with biologic products, such as those we are developing;
- an annual, nondeductible fee payable by any entity that manufactures or imports specified branded prescription drugs and biologic agents;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program;
- expansion of healthcare fraud and abuse laws, including the False Claims Act and the Anti-Kickback Statute, new government investigative powers and enhanced penalties for noncompliance;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices;
- extension of manufacturers' Medicaid rebate liability;
- expansion of eligibility criteria for Medicaid programs;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- new requirements to report financial arrangements with physicians and teaching hospitals;
- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians; and
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in and conduct comparative clinical effectiveness research, along with funding for such research.

There have been judicial and Congressional challenges to certain aspects of the Affordable Care Act, and we expect there will be additional challenges and amendments to the Affordable Care Act in the future, particularly in light of the new presidential administration and U.S. Congress. At this time, the full effect that the Affordable Care Act would have on our business remains unclear.

In addition, other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. In August 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least \$1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers of 2% per fiscal year, which went into effect on April 1, 2013 and, due to subsequent legislative amendments, will remain in effect through 2025 unless additional Congressional action is taken. On January 2, 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, reduced Medicare payments to several providers, including hospitals, and an increase in the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other healthcare funding and otherwise affect the prices we may obtain.

We expect that the Affordable Care Act, as well as other healthcare reform measures that may be adopted in the future, may result in additional reductions in Medicare and other healthcare funding, more rigorous coverage criteria, new payment methodologies and in additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government 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 being able to generate revenue, attain profitability, or commercialize our product candidates, if approved.

Moreover, there has recently been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products. Individual states in the United States have become increasingly aggressive in implementing regulations designed to contain pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures. Legally mandated price controls on payment amounts by third-party payors or other restrictions could harm our business, results of operations, financial condition and prospects. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. This could reduce the ultimate demand for our product candidates, if approved, or put pressure on our product pricing, which could negatively affect our business, results of operations, financial condition and prospects.

Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. We cannot be sure whether additional legislative changes will be enacted, or whether the FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be. In addition, increased scrutiny by Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing testing and other requirements.

Governments outside the United States tend to impose strict price controls, which may adversely affect our revenues, if any.

In some countries, particularly the countries of the European Union, the pricing of prescription drugs is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. In addition, there can be considerable

pressure by governments and other stakeholders on prices and reimbursement levels, including as part of cost containment measures. Political, economic and regulatory developments may further complicate pricing negotiations, and pricing negotiations may continue after coverage and reimbursement have been obtained. Reference pricing used by various European Union member states and parallel distribution or arbitrage between low-priced and high-priced member states, can further reduce prices. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies. If coverage and reimbursement of our products are unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business could be harmed, possibly materially.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could harm our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological materials such as human stool. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. 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 for failure to comply with such laws and regulations.

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.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Our failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Risks Related to Our Intellectual Property

If we are unable to adequately protect our proprietary technology, or obtain and maintain issued patents which are sufficient to protect our product candidates, others could compete against us more directly, which would have a material adverse impact on our business, results of operations, financial condition and prospects.

Our success depends in large 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 proprietary technology and products. We seek to protect our proprietary position by filing patent applications in the United States and abroad related to our novel technologies and product candidates. We also rely on trade secrets to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection.

The patent prosecution process is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost, in a timely manner, or in all jurisdictions. Prosecution of our patent portfolio is at a very early stage, and we are just beginning to reach the statutory deadlines for deciding whether and where to initiate prosecution in specific foreign jurisdictions by filing national state applications based on our Patent Cooperation Treaty applications. As those deadlines come

due, we will have to decide whether and where to pursue patent protection for the various inventions claimed in our patent portfolio, and we will only have the opportunity to obtain patents in those jurisdictions where we pursue protection. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. It is possible that defects of form in the preparation or filing of our patents or patent applications may exist, or may arise in the future, such as, with respect to proper priority claims, inventorship, claim scope or patent term adjustments. If there are material defects in the form or preparation of our patents or patent applications, such patents or applications may be invalid and unenforceable. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how. Any of these outcomes could impair our ability to prevent competition from third parties, which may have an adverse impact on our business, financial condition and operating results.

Pursuant to our current and future license agreements with third parties, in some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that we license from third parties. We may also require the cooperation of our licensors to enforce any licensed patent rights, and such cooperation may not be provided. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business.

Our patent portfolio is in the early stages of prosecution. We currently have two issued U.S. patents. Although we have numerous patent applications pending, substantive prosecution has begun in only a small number of those applications. We cannot provide any assurances that any of our pending patent applications will mature into issued patents and, if they do, that such patents or our current patents will include claims with a scope sufficient to protect our product candidates or otherwise provide any competitive advantage. For example, we are pursuing claims to compositions of certain bacterial populations. Any claims that may issue may provide coverage for such compositions and/or their use. However, such claims would not prevent a third party from commercializing alternative compositions that do not include both of the bacterial populations claimed in pending applications, potential applications or patents that have or may issue. There can be no assurance that any such alternative composition will not be equally effective. These and other factors may provide opportunities for our competitors to design around our patents, should they issue.

Moreover, other parties have developed technologies that may be related or competitive to our approach, and may have filed or may file patent applications and may have received or may receive patents that may overlap or conflict with our patent applications, either by claiming similar methods or by claiming subject matter that could dominate our patent position. In addition, given the early stage of prosecution of our portfolio, it may be some time before we understand how patent offices react to our patent claims and whether they identify prior art of relevance that we have not already considered, which could be an impediment to our patents issuing.

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. Therefore, we cannot know with certainty whether we were the first to make the inventions claimed in any owned patents or pending patent applications, or that we were the first to file for patent protection of such inventions, nor can we know whether those from whom we may license patents were the first to make the inventions claimed or were the first to file. For these and other reasons, the issuance, scope, validity, enforceability and commercial value of our patent rights are subject to a level of uncertainty. Our pending and future patent applications may not result in patents being issued which protect our technology or products, in whole or in part, or which effectively prevent others from commercializing competitive technologies and products. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection.

We may be subject to a third-party pre-issuance submission of prior art to the United States Patent and Trademark Office, or USPTO, or become involved in opposition, derivation, reexamination, inter partes review, post-grant review or interference proceedings challenging our patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate,

our patent rights, allow third parties to commercialize our technology or products and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates. Furthermore, an adverse decision in an interference proceeding can result in a third party receiving the patent right sought by us, which in turn could affect our ability to develop, market or otherwise commercialize our product candidates. The issuance, scope, validity, enforceability and commercial value of our patents are subject to a level of uncertainty.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation. Due to legal standards relating to patentability, validity, enforceability and claim scope of patents covering biotechnological and pharmaceutical inventions, our ability to obtain, maintain and enforce patents is uncertain and involves complex legal and factual questions. Even if issued, a patent's validity, inventorship, ownership or enforceability is not conclusive. Accordingly, rights under any existing patent or any patents we might obtain or license may not cover our product candidates, or may not provide us with sufficient protection for our product candidates to afford a commercial advantage against competitive products or processes, including those from branded and generic pharmaceutical companies.

The degree of future protection for our proprietary rights is uncertain, and we cannot ensure that:

- any of our pending patent applications, if issued, will include claims having a scope sufficient to protect our product candidates or any other products or product candidates;
- any of our pending patent applications will issue as patents at all;
- we will be able to successfully commercialize our product candidates, if approved, before our relevant patents expire;
- we were the first to make the inventions covered by any existing patent and pending patent applications;
- we were the first to file patent applications for these inventions;
- others will not develop similar or alternative technologies that do not infringe or design around our patents;
- others will not use pre-existing technology to effectively compete against us;
- any of our patents, if issued, will be found to ultimately be valid and enforceable;
- third parties will not compete with us in jurisdictions where we do not pursue and obtain patent protection;
- we will be able to obtain and/or maintain necessary or useful licenses on reasonable terms or at all;
- any patents issued to us will provide a basis for an exclusive market for our commercially viable products, will provide us with any competitive advantages or will not be challenged by third parties;
- we will develop additional proprietary technologies or product candidates that are separately patentable; or
- our commercial activities or products will not infringe upon the patents or proprietary rights of others.

Any litigation to enforce or defend our patent rights, even if we were to prevail, could be costly and time-consuming and would divert the attention of our management and key personnel from our business operations. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded if we were to prevail may not be commercially meaningful. Even if we are successful, domestic or foreign litigation, or

USPTO or foreign patent office proceedings, may result in substantial costs and distraction to our management. We may not be able, alone or with our licensors or potential collaborators, to prevent misappropriation of our proprietary rights, particularly in countries where the laws may not protect such rights as fully as in the United States. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation or other proceedings, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation or other proceedings. In addition, during the course of this kind of litigation or proceedings, there could be public announcements of the results of hearings, motions or other interim proceedings or developments or public access to related documents. If investors perceive these results to be negative, the market price for our common stock could be significantly harmed.

If we fail to comply with our obligations in the agreements under which we may license intellectual property rights from third parties or otherwise experience disruptions to our business relationships with our licensors, we could lose rights that are important to our business.

We have entered into, and may be required to enter into in the future, intellectual property license agreements that are important to our business. These license agreements may impose various diligence, milestone payment, royalty and other obligations on us. For example, we have entered into exclusive license agreements with the University of Chicago and Mayo Clinic pursuant to which we are required to use efforts to engage in various development and commercialization activities with respect to licensed products, and are required to satisfy specified milestone and royalty payment obligations. If we fail to comply with any obligations under our agreements with licensors, we may be subject to termination of the license agreement in whole or in part or increased financial obligations to our licensors, in which case our ability to develop or commercialize products covered by the license agreement will be impaired. Further, we may need to outsource and rely on third parties for many aspects of the clinical development, sales and marketing of our products covered under our current and future license agreements. Delay or failure by these third parties could adversely affect the continuation of our license agreements with our licensors.

In addition, disputes may arise regarding intellectual property subject to a license agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement; and
- our diligence obligations under the license agreement and what activities satisfy those obligations.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates.

The intellectual property which we have licensed from the University of Chicago and Mayo Clinic was discovered through government funded programs and thus may be subject to federal regulations such as “march-in” rights, certain reporting requirements, and a preference for U.S. industry. Compliance with such regulations may limit our exclusive rights, subject us to expenditure of resources with respect to reporting requirements, and limit our ability to contract with non-U.S. manufacturers.

We have licensed certain intellectual property from the University of Chicago and Mayo Clinic. These agreements indicate that the rights licensed to us are subject to the obligations to and the rights of the U.S. government, including those set forth in the Bayh-Dole Act of 1980, or the Bayh-Dole Act. As a result, the U.S. government may have certain rights to intellectual property embodied in our current or future therapeutics based on the licensed intellectual property. These U.S. government rights in certain inventions developed under a government-funded program include a non-exclusive, non-transferable, irrevocable worldwide license to use inventions for any governmental purpose. In addition, the U.S. government has the right to require us to grant

exclusive, partially exclusive, or nonexclusive licenses to any of these inventions to a third party if it determines that: (i) adequate steps have not been taken to commercialize the invention; (ii) government action is necessary to meet public health or safety needs; or (iii) government action is necessary to meet requirements for public use under federal regulations, also referred to as “march-in rights.” While the U.S. government has sparingly used, and to our knowledge never successfully exercised, such march-in rights, any exercise of the march-in rights by the U.S. government could harm our competitive position, business, financial condition, results of operations, and prospects. If the U.S. government exercises such march-in rights, we may receive compensation that is deemed reasonable by the U.S. government in its sole discretion, which may be less than what we might be able to obtain in the open market. Intellectual property generated under a government funded program is also subject to certain reporting requirements, compliance with which may require us to expend substantial resources.

In addition, the U.S. government requires that any therapeutics embodying any invention generated through the use of U.S. government funding be manufactured substantially in the United States. The manufacturing preference requirement can be waived if the owner of the intellectual property can show that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible. This preference for U.S. manufacturers may limit our ability to contract with non-U.S. therapeutic manufacturers for therapeutics covered by such intellectual property.

If we are unable to protect the confidentiality of our trade secrets and know-how, our business and competitive position would be harmed.

In addition to seeking patents for some of our technology and product candidates, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties. We also seek to enter into confidentiality and invention or patent assignment agreements with our employees, advisors and consultants. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Our trade secrets may also be obtained by third parties by other means, such as breaches of our physical or computer security systems. 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 inside and outside the United States are less willing or unwilling to protect trade secrets. Moreover, if any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be harmed.

Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our products.

As is the case with other biotechnology companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biotechnology industry involves both technological and legal complexity, and is therefore costly, time-consuming and inherently uncertain. In addition, recent patent reform legislation could further increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. On September 16, 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. 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 and may also affect patent litigation. The USPTO recently developed new regulations and procedures to govern administration of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, in particular the first to file provisions, only became effective on March 16,

2013. A third party that files a patent application in the USPTO after that date but before we could therefore be awarded a patent covering an invention of ours even if we had made the invention before it was made by the third party. This will require us to be cognizant going forward of the time from invention to filing of a patent application. Thus, for our U.S. patent applications containing a priority claim after March 16, 2013, there is a greater level of uncertainty in the patent law.

Moreover, some of the patent applications in our portfolio will be subject to examination under the pre-Leahy-Smith Act law and regulations, while other patents applications in our portfolio will be subject to examination under the law and regulations, as amended by the Leahy-Smith Act. This introduces additional complexities into the prosecution and management of our portfolio.

In addition, the Leahy-Smith Act limits where a patentee may file a patent infringement suit and provides opportunities for third parties to challenge any issued patent in the USPTO. These provisions apply to all of our U.S. patents, even those issued before March 16, 2013. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in U.S. federal court necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a federal court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims because it may be easier for them to do so relative to challenging the patent in a federal court action. It is not clear what, if any, impact the Leahy-Smith Act will have on the operation of our business. 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 and financial condition.

In addition, recent United States Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. From time to time, the U.S. Supreme Court, other federal courts, the United States Congress, or the USPTO, may change the standards of patentability and any such changes could have a negative impact on our business.

A number of recent cases decided by the Supreme Court have involved questions of when claims reciting abstract ideas, laws of nature, natural phenomena and/or natural products are eligible for a patent, regardless of whether the claimed subject matter is otherwise novel and inventive. These cases include *Association for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 12-398 (2013) or *Myriad*; *Alice Corp. v. CLS Bank International*, 573 U.S. 13-298 (2014); and *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, or *Prometheus*, 566 U.S. 10-1150 (2012). In response to these cases, the USPTO has issued guidance to the examining corps.

The full impact of these decisions is not yet known. The *Myriad* decision, issued on June 13, 2013, is the most recent Supreme Court decision to address patent eligibility of natural products. Our current product candidates include natural products, therefore, this decision and its interpretation by the courts and the USPTO may impact prosecution, defense and enforcement of our patent portfolio. In *Myriad*, the Court held that claims to isolated genomic DNA are not patentable, but claims to complementary DNA, or cDNA, molecules, which are not genomic sequences, may be patent eligible because they are not a natural product. The effect of the decision on patents for other isolated natural products is uncertain. However, on March 4, 2014, the USPTO issued a memorandum to patent examiners providing guidance for examining claims that recite laws of nature, natural phenomena or natural products under the *Myriad* and *Prometheus* decisions. The guidance did not limit the application of *Myriad* to DNA but, rather, applied the decision broadly to other natural products, which may include our product candidates. The March 4, 2014 memorandum and the USPTO's interpretation of the cases and announced examination rubric received widespread criticism from stakeholders during a public comment period and was superseded by interim guidance published on December 15, 2014. The USPTO's interpretation of the case law and new guidelines for examination may influence, possibly adversely, prosecution and defense of certain types of claims in our portfolio.

In addition to increasing uncertainty with regard to our ability to obtain future patents, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on these and other decisions by Congress, the federal courts and the USPTO, the laws and regulations governing patents could change or be interpreted in unpredictable ways that would weaken our ability to obtain new patents or to enforce any patents that may issue to us in the future. In addition, these events may adversely affect our ability to defend any patents that may issue in procedures in the USPTO or in courts.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.

Our commercial success depends upon our ability, and the ability of our collaborators, to develop, manufacture, market and sell our product candidates and use our proprietary technologies without infringing the proprietary rights of third parties. There is considerable intellectual property litigation in the biotechnology and pharmaceutical industries. While no such litigation has been brought against us and we have not been held by any court to have infringed a third party's intellectual property rights, we cannot guarantee that our technology, products or use of our products do not infringe third-party patents.

Numerous patents and pending applications are owned by third parties in the fields in which we are developing product candidates, both in the United States and elsewhere. It is also possible that we have failed to identify relevant third-party patents or applications. For example, applications filed before November 29, 2000 and certain applications filed after that date that will not be filed outside the United States remain confidential until patents issue. Moreover, it is difficult for industry participants, including us, to identify all third-party patent rights that may be relevant to our product candidates and technologies because patent searching is imperfect due to differences in terminology among patents, incomplete databases and the difficulty in assessing the meaning of patent claims. We may fail to identify relevant patents or patent applications or may identify pending patent applications of potential interest but incorrectly predict the likelihood that such patent applications may issue with claims of relevance to our technology. In addition, we may be unaware of one or more issued patents that would be infringed by the manufacture, sale or use of a current or future product candidate, or we may incorrectly conclude that a third-party patent is invalid, unenforceable or not infringed by our activities. Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our technologies, our products or the use of our products. We are aware of several pending patent applications containing one or more claims that could be construed to cover some of our product candidates or technology, should those claims issue in their original form or in the form presently being pursued. In addition, we are aware of a third-party patent family that includes issued and allowed patents, including in the United States, with claims that, if valid and enforceable, could be construed to cover some of our product candidates or their methods of use.

The biotechnology and pharmaceutical industries are characterized by extensive litigation regarding patents and other intellectual property rights. Other parties may allege that our product candidates or the use of our technologies infringe patent claims or other intellectual property rights held by them or that we are employing their proprietary technology without authorization. We may become party to, or threatened with, future adversarial proceedings or litigation regarding intellectual property rights with respect to our products and technology, including interference or derivation proceedings before the USPTO and similar bodies in other countries. Third parties may assert infringement claims against us based on existing intellectual property rights and intellectual property rights that may be granted in the future. If we were to challenge the validity of an issued U.S. patent in court, such as an issued U.S. patent of potential relevance to some of our product candidates or methods of use, we would need to overcome a statutory presumption of validity that attaches to every U.S. patent. This means that in order to prevail, we would have to present clear and convincing evidence as to the invalidity of the patent's claims. There is no assurance that a court would find in our favor on questions of infringement or validity.

Patent and other types of intellectual property litigation can involve complex factual and legal questions, and their outcome is uncertain. If we are found, or believe there is a risk we may be found, to infringe a third party's intellectual property rights, we could be required or may choose to obtain a license from such third party to continue developing and marketing our products and technology. However, we may not be able to obtain any such 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 access to the same technologies licensed to us. We could be forced, including by court order, to cease commercializing the infringing technology or product. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations, which could materially harm our business. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business.

Even if we are successful in these proceedings, we may incur substantial costs and divert management time and attention in pursuing these proceedings, which could have a material adverse effect on us. If we are unable to avoid infringing the patent rights of others, we may be required to seek a license, defend an infringement action or challenge the validity of the patents in court, or redesign our products. Patent litigation is costly and time-consuming. We may not have sufficient resources to bring these actions to a successful conclusion. In addition, intellectual property litigation or claims could force us to do one or more of the following:

- cease developing, selling or otherwise commercializing our product candidates;
- pay substantial damages for past use of the asserted intellectual property;
- obtain a license from the holder of the asserted intellectual property, which license may not be available on reasonable terms, if at all; and
- in the case of trademark claims, redesign, or rename, some or all of our product candidates or other brands to avoid infringing the intellectual property rights of third parties, which may not be possible and, even if possible, could be costly and time-consuming.

Any of these risks coming to fruition could have a material adverse effect on our business, results of operations, financial condition and prospects.

Issued patents covering our product candidates could be found invalid or unenforceable or could be interpreted narrowly if challenged in court.

Competitors may infringe our intellectual property, including our patents or the patents of our licensors. As a result, we may be required to file infringement claims to stop third-party infringement or unauthorized use. This can be expensive, particularly for a company of our size, and time-consuming. If we initiated legal proceedings against a third party to enforce a patent, if and when issued, covering one of our product candidates, the defendant could counterclaim that the patent covering our product candidate is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge include alleged failures to meet any of several statutory requirements, including lack of novelty, obviousness or non-enablement, or failure to claim patent eligible subject matter. Grounds for unenforceability assertions include allegations 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, post grant review and equivalent proceedings in foreign jurisdictions, such as opposition proceedings. Such proceedings could result in revocation or amendment of our patents in such a way that they no longer cover our product candidates or competitive products. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to validity, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant 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 our product candidates. Moreover, even if not found invalid or unenforceable, the claims of our patents could be construed narrowly or in a manner that does not cover the allegedly infringing technology in question. Such a loss of patent protection would have a material adverse impact on our business.

Obtaining and maintaining our 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 noncompliance with these requirements.

Periodic maintenance fees on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent and, in some jurisdictions, during the pendency of a patent application. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured 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. Noncompliance 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. In such an event, our competitors might be able to enter the market, which would have a material adverse effect on our business.

We may be subject to claims challenging the inventorship or ownership of our patents and other intellectual property.

It is our policy to enter into confidentiality and intellectual property assignment agreements with our employees, consultants, contractors and advisors. These agreements generally provide that inventions conceived by the party in the course of rendering services to us will be our exclusive property. However, these agreements may not be honored and may not effectively assign intellectual property rights to us. For example, even if we have a consulting agreement in place with an academic advisor pursuant to which such academic advisor is required to assign any inventions developed in connection with providing services to us, such academic advisor may not have the right to assign such inventions to us, as it may conflict with his or her obligations to assign all such intellectual property to his or her employing institution.

Litigation may be necessary to defend against these and other claims challenging inventorship or ownership. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

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

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. We may also engage advisors and consultants who are concurrently employed at universities or other organizations or who perform services for other entities. Although we try to ensure that our employees, advisors and consultants do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or our employees, advisors or consultants have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such party's former or current employer or in violation of an agreement with another party. Although we have no knowledge of any such claims being alleged to date, if such claims were to arise, litigation may be necessary to defend against any such claims.

In addition, while it is our policy to require our employees, consultants, advisors and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own. Our and their assignment agreements may not be self-executing or may be breached, and we may be forced to bring claims against third parties, or defend claims they may bring against us, to determine the ownership of what we regard as our intellectual property. Similarly, we may be subject to claims that an employee, advisor or consultant performed work for us that conflicts with that person's obligations to a third party, such as an employer, and thus, that the third party has an ownership interest in the intellectual property arising out of work performed for us. Litigation may be necessary to defend against these claims. Although we have no knowledge of any such claims being alleged to date, if such claims were to arise, litigation may be necessary to defend against any such claims.

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to management.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

Our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names, which we need to build name recognition among potential collaborators or customers in our markets of interest. At times, competitors may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected. Our efforts to enforce or protect our proprietary rights related to trademarks, trade names, domain names or other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely impact our financial condition or results of operations.

We will not seek to protect our intellectual property rights in all jurisdictions throughout the world and we may not be able to adequately enforce our intellectual property rights even in the jurisdictions where we seek protection.

Filing, prosecuting and defending patents on product candidates in all countries and jurisdictions throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States could be less extensive than in the United States, assuming that rights are obtained in the United States and assuming that rights are pursued outside the United States. The statutory deadlines for pursuing patent protection in individual foreign jurisdictions are based on the priority date of each of our patent applications. For all of the patent families in our portfolio, including the families that may provide coverage for our lead product candidates, the relevant statutory deadlines have not yet expired. Therefore, for each of the patent families that we believe provide coverage for our lead product candidates, we will need to decide whether and where to pursue protection outside the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, even if we do elect to pursue patent rights outside the United States, we may not be able to obtain relevant claims and/or 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 do not pursue and obtain patent protection to develop their own products and further, may export otherwise infringing products to territories where we have

patent protection, but enforcement is not as strong as that in the United States. These products may compete with our products and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Even if we pursue and obtain issued patents in particular jurisdictions, our patent claims or other intellectual property rights may not be effective or sufficient to prevent third parties from so competing.

The laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States. Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. The legal systems of some countries, particularly developing countries, do not favor the enforcement of patents and other intellectual property protection, especially those relating to biotechnology. This could make it difficult for us to stop the infringement of our patents, if obtained, or the misappropriation of our other intellectual property rights. For example, many foreign countries have compulsory licensing laws under which a patent owner must grant licenses to third parties. In addition, many countries limit the enforceability of patents against third parties, including government agencies or government contractors. In these countries, patents may provide limited or no benefit. Patent protection must ultimately be sought on a country-by-country basis, which is an expensive and time-consuming process with uncertain outcomes. Accordingly, we may choose not to seek patent protection in certain countries, and we will not have the benefit of patent protection in such countries.

If our ability to obtain and, if obtained, enforce our patents to stop infringing activities is inadequate, third parties may compete with our products, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing. Accordingly, our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property we develop or license.

Risks Related to Employee Matters and Managing Growth and Other Risks Related to Our Business

Our future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel.

We are highly dependent on Balkrishan (Simba) Gill, our President and Chief Executive Officer, as well as the other principal members of our management, scientific and clinical team. Although we have entered into employment agreements with our executive officers, each of them may terminate their employment with us at any time. We do not maintain “key person” insurance for any of our executives or other employees.

Recruiting and retaining qualified scientific, clinical, manufacturing and sales and marketing personnel will also be critical to our success. The loss of the services of our executive officers or other key employees could impede the achievement of our research, development and commercialization objectives and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time due to the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize products. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain high quality personnel, our ability to pursue our growth strategy will be limited.

We expect to expand our development and regulatory capabilities and potentially implement sales, marketing and distribution capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

We expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of product development, regulatory affairs, clinical affairs and manufacturing and, if any of our product candidates receives marketing approval, sales, marketing and distribution. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

A variety of risks associated with operating internationally could materially adversely affect our business.

We currently have limited international operations, but our business strategy incorporates potentially expanding internationally if any of our product candidates receive regulatory approval. Doing business internationally involves a number of risks, including but not limited to:

- multiple, conflicting and changing laws and regulations, such as privacy regulations, tax laws, export and import restrictions, employment laws, regulatory requirements and other governmental approvals, permits and licenses;
- failure by us to obtain and maintain regulatory approvals for the use of our products in various countries;
- additional potentially relevant third-party patent rights;
- complexities and difficulties in obtaining protection and enforcing our intellectual property;
- difficulties in staffing and managing foreign operations;
- complexities associated with managing multiple payor reimbursement regimes, government payors or patient self-pay systems;
- limits in our ability to penetrate international markets;
- financial risks, such as longer payment cycles, difficulty collecting accounts receivable, the impact of local and regional financial crises on demand and payment for our products and exposure to foreign currency exchange rate fluctuations;
- natural disasters, political and economic instability, including wars, terrorism and political unrest, outbreak of disease, boycotts, curtailment of trade and other business restrictions;
- certain expenses including, among others, expenses for travel, translation and insurance; and
- regulatory and compliance risks that relate to maintaining accurate information and control over sales and activities that may fall within the purview of the U.S. Foreign Corrupt Practices Act, its books and records provisions, or its anti-bribery provisions.

Any of these factors could significantly harm our future international expansion and operations and, consequently, our results of operations.

Our business and operations would suffer in the event of information technology and other system failures.

Despite the implementation of security measures, our internal computer systems and those of our current and future contractors and consultants are vulnerable to damage from computer viruses, unauthorized access,

natural disasters, terrorism, war and telecommunication and electrical failures. While we are not aware of any such material system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption to our product development programs and our business operations. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Likewise, we rely on third parties to manufacture our product candidates and conduct clinical trials, and similar events relating to their computer systems could also have a material adverse effect on our business. 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 confidential or proprietary information, we could incur liability and the further development and commercialization of our product candidates could be delayed.

We rely on a set of cloud-based software services and access these services via the Internet for the vast majority of our computing, storage, bandwidth, and other services. Any disruption of or interference with our use of our cloud-based services would negatively affect our operations and could seriously harm our business.

We use several distributed computing infrastructure platforms for business operations, or what is commonly referred to as “cloud” computing services and we access these services via the Internet. Any transition of the cloud services currently provided by an existing vendor to another cloud provider would be difficult to implement and will cause us to incur significant time and expense. Given this, any significant disruption of or interference with our use of these cloud computing services would negatively impact our operations and our business would be seriously harmed. If our employees or partners are not able to access our cloud computing services or encounter difficulties in doing so, we may experience business disruption. The level of service provided by our cloud computing vendors, including the ability to secure our confidential information and the confidential information of third parties that is shared with us, may also impact the perception of our company and could seriously harm our business and reputation and create liability for us. If a cloud computing service that we use experiences interruptions in service regularly or for a prolonged basis, or other similar issues, our business could be seriously harmed.

In addition, a cloud computing service may take actions beyond our control that could seriously harm our business, including:

- discontinuing or limiting our access to its platform;
- increasing pricing terms;
- terminating or seeking to terminate our contractual relationship altogether;
- establishing more favorable relationships with one or more of our competitors; or
- modifying or interpreting its terms of service or other policies in a manner that impacts our ability to run our business and operations.

Our cloud computing services have broad discretion to change and interpret its terms of service and other policies with respect to us, and those actions may be unfavorable to us. Our cloud computing services may also alter how we are able to process data on the platform. If a cloud computing services makes changes or interpretations that are unfavorable to us, our business could be seriously harmed.

Our efforts to protect the information shared with us may be unsuccessful due to the actions of third parties, software bugs, or other technical malfunctions, employee error or malfeasance, or other factors. In addition, third parties may attempt to fraudulently induce employees or users to disclose information to gain access to our data or third-party data entrusted to us. If any of these events occur, our or third-party information could be accessed or disclosed improperly. Some partners or collaborators may store information that we share with them on their own computing system. If these third parties fail to implement adequate data-security practices or fail to comply with our policies, our data may be improperly accessed or disclosed. And even if these third parties take all these steps, their networks may still suffer a breach, which could compromise our data.

Any incidents where our information is accessed without authorization, or is improperly used, or incidents that violate our policies, could damage our reputation and our brand and diminish our competitive position. In addition, affected parties or government authorities could initiate legal or regulatory action against us over those incidents, which could cause us to incur significant expense and liability or result in orders or consent decrees forcing us to modify our business practices. Concerns over our privacy practices, whether actual or unfounded, could damage our reputation and brand and deter users, advertisers, and partners from using our products and services. Any of these occurrences could seriously harm our business.

We are also subject to many federal, state, and foreign laws and regulations, including those related to privacy, rights of publicity, data protection, content regulation, intellectual property, health and safety, competition, protection of minors, consumer protection, employment, and taxation. These laws and regulations are constantly evolving and may be interpreted, applied, created, or amended in a manner that could seriously harm our business.

Acquisitions or joint ventures could disrupt our business, cause dilution to our stockholders and otherwise harm our business.

We may acquire other businesses, products or technologies as well as pursue strategic alliances, joint ventures, technology licenses or investments in complementary businesses. We have only made one acquisition to date, and our ability to do so successfully is unproven beyond this instance. Any of these transactions could be material to our financial condition and operating results and expose us to many risks, including:

- disruption in our relationships with future customers or with current or future distributors or suppliers as a result of such a transaction;
- unanticipated liabilities related to acquired companies;
- difficulties integrating acquired personnel, technologies and operations into our existing business;
- diversion of management time and focus from operating our business to acquisition integration challenges;
- increases in our expenses and reductions in our cash available for operations and other uses;
- possible write-offs or impairment charges relating to acquired businesses; and
- inability to develop a sales force for any additional product candidates.

Foreign acquisitions involve unique risks in addition to those mentioned above, including those related to integration of operations across different cultures and languages, currency risks and the particular economic, political and regulatory risks associated with specific countries.

Also, the anticipated benefit of any acquisition may not materialize. Future acquisitions or dispositions could result in potentially dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities or amortization expenses or write-offs of goodwill, any of which could harm our financial condition. We cannot predict the number, timing or size of future joint ventures or acquisitions, or the effect that any such transactions might have on our operating results.

Risks Related to Our Common Stock and this Offering

An active trading market for our common stock may not develop.

Prior to this offering, there has been no public market for our common stock. The initial public offering price for our common stock was determined through negotiations with the underwriters. Although we intend to apply to list our common stock on The Nasdaq Global Market, an active trading market for our shares may never

develop or be sustained following this offering. If an active market for our common stock does not develop, it may be difficult for you to sell shares you purchase in this offering without depressing the market price for the shares or at all.

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, and we could be subject to securities class action litigation as a result.

Our stock price is likely to be volatile. The stock market in general and the market for smaller 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;
- actual or anticipated changes in our growth rate relative to our competitors;
- results of clinical trials of our product candidates or those of our competitors;
- developments related to any future collaborations;
- regulatory or legal developments in the United States and other countries;
- adverse actions taken by regulatory agencies with respect to our preclinical studies or clinical trials, manufacturing or sales and marketing activities;
- any adverse changes to our relationship with third party contractors or manufacturers;
- development of new product candidates that may address our markets and may make our existing product candidates less attractive;
- changes in physician, hospital or healthcare provider practices that may make our product candidates less useful;
- announcements by us, our collaborators or our competitors of significant acquisitions, strategic partnerships, joint ventures, collaborations or capital commitments;
- 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 any of our product candidates or product development programs;
- failure to meet or exceed financial estimates and projections of the investment community or that we provide to the public;
- press reports or other negative publicity, whether or not true, about our business;
- the results of our efforts to discover, develop, acquire or in-license additional product candidates or products;
- 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.

Any of these factors may result in large and sudden changes in the volume and trading price of our common stock. In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because biopharmaceutical companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

After this offering, our executive officers, directors and principal stockholders, if they choose to act together, will continue to have the ability to control or significantly influence all matters submitted to stockholders for approval.

Upon the closing of this offering, based on the number of shares of common stock outstanding as of _____, our executive officers, directors and stockholders who owned more than 5% of our outstanding common stock before this offering and their respective affiliates will, in the aggregate, hold shares representing approximately _____% of our outstanding voting stock. As a result, if these stockholders were to choose to act together, they would be able to control or significantly influence all matters submitted to our stockholders for approval, as well as our management and affairs. For example, these persons, if they choose to act together, would control or significantly influence the election of directors and approval of any merger, consolidation or sale of all or substantially all of our assets. They may also have interests that differ from yours and may vote in a way with which you disagree and which may be adverse to your interests. This concentration of ownership control may have the effect of delaying, deferring or preventing a change in control of our company, could deprive our stockholders of an opportunity to receive a premium for their common stock as part of a sale of our company and might ultimately affect the market price of our common stock.

If you purchase shares of common stock in this offering, you will suffer immediate dilution of your investment.

The initial public offering price of our common stock is substantially higher than the net tangible book value per share of our common stock. Therefore, if you purchase shares of our common stock in this offering, you will pay a price per share that substantially exceeds our net tangible book value per share after this offering. To the extent shares subsequently are issued under outstanding options or warrants, you will incur further dilution. Based on an initial public offering price of \$ _____ per share, the midpoint of the price range set forth on the cover page of this prospectus, you will experience immediate dilution of \$ _____ per share as of _____, representing the difference between our pro forma as adjusted net tangible book value per share, which gives effect to this offering, and the initial public offering price. In addition, purchasers of common stock in this offering will have contributed approximately _____% of the aggregate price paid by all purchasers of our stock but will own only approximately _____% of our common stock outstanding after this offering.

We have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. We intend to use the net proceeds from this offering to fund proof of concept clinical trials in our inflammatory diseases and oncology programs, to invest in our platform and to advance additional preclinical development activities, and the remainder, if any, to fund working capital and other general corporate purposes. However, our use of these proceeds may differ substantially from our current plans. The failure by our management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our common stock to decline and delay the development of our product candidates. Pending their use, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value.

A significant portion of our total outstanding shares are eligible to be sold into the market in the near future, which could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. Immediately upon the completion of this offering, we will have _____ outstanding shares of common stock, assuming the underwriters do not exercise their over-allotment option to purchase additional shares, based on the number of shares outstanding as of _____. This includes the shares that we are selling in this offering, which may be resold in the public market immediately without restriction, unless purchased by our affiliates or existing stockholders. The remaining shares are currently restricted as a result of securities laws or lock-up agreements but will become eligible to be sold 180 days after the date of this offering, unless held by one of our affiliates, in which case the resale of those securities will be subject to volume limitations under Rule 144 of the Securities Act of 1933, as amended, or the Securities Act. Moreover, after this offering, holders of an aggregate of _____ shares of our common stock, including _____ shares issuable upon the exercise of warrants, will have rights, subject to specified conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders, including entities affiliated with Flagship Pioneering, until such shares can otherwise be sold without restriction under Rule 144 or until the rights terminate pursuant to the terms of the investors' rights agreement between us and such holders. See "Certain Relationships and Related Party Transactions—Investors' Rights Agreement." We also intend to register all shares of common stock that we may issue under our equity compensation plans. Once we register these shares, they can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates and the lock-up agreements described in the "Underwriting" section of this prospectus.

We are an "emerging growth company," and the reduced disclosure requirements applicable to emerging growth companies may make our common stock less attractive to investors.

We are an "emerging growth company" as that term is used in the JOBS Act, and may 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 outstanding ordinary shares that are held by non-affiliates exceeds \$700 million as of the prior June 30, and (2) the date on which we have issued more than \$1.0 billion in non-convertible debt during the prior three year period. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure in this prospectus;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

We have elected to take advantage of certain of the reduced reporting obligations in the registration statement of which this prospectus is a part. In particular, in this prospectus, we have not included all of the

executive compensation related information that would be required if we were not an emerging growth company. We cannot predict whether investors will find our common stock less attractive if we 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 reduced or more volatile. In addition, 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. This allows an emerging growth company to delay the adoption of these accounting standards until they would otherwise apply to private companies. We have elected to use the extended transition period for complying with new or revised accounting standards; and as a result of this election, our financial statements may not be comparable to companies that comply with public company effective dates.

We will incur 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 and corporate governance practices.

As a public company, and particularly after we are no longer an emerging growth company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of The Nasdaq Global Market and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives.

Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time consuming and costly. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance, which in turn could make it more difficult for us to attract and retain qualified members of our board of directors.

We are evaluating these rules and regulations, and cannot predict or estimate the amount of additional costs we may incur or the timing of such costs. These rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, or Section 404, we will be required to furnish a report by our management on our internal control over financial reporting. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we will be engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that we will not be able to conclude, within the prescribed timeframe or at all, that our internal control over financial reporting is effective as required by Section 404. If we identify one or more material weaknesses, it could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our financial statements.

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

Upon completion of this offering, we will become subject to the periodic reporting requirements of the Exchange Act. Our disclosure controls and procedures are designed to reasonably assure that information

required to be disclosed by us 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. 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 securities or industry analysts do not publish research or reports about our business, or if they issue an adverse or misleading opinion regarding our business stock, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. We do not currently have and may never obtain research coverage by securities and industry analysts. If no or few securities or industry analysts commence coverage of us, the trading price for our stock would be negatively impacted. In the event we obtain securities or industry analyst coverage, if any of the analysts who cover us issue an adverse or misleading opinion regarding us, our business model, our intellectual property or our stock performance, or if our target preclinical studies or clinical studies and/or operating results fail to meet the expectations of analysts, our stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

Provisions in our restated certificate of incorporation and amended and restated bylaws 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 restated certificate of incorporation and our amended and restated bylaws that will become effective upon the closing of this offering may discourage, delay or prevent a merger, acquisition or other change in control of our company that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, because our board of directors is responsible for appointing the members of our management team, 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. Among other things, these provisions include those establishing:

- a classified board of directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of our board of directors;
- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from filling vacancies on our board of directors;
- the ability of our board of directors to authorize the issuance of shares of preferred stock and to determine the terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquirer;
- the ability of our board of directors to alter our bylaws without obtaining stockholder approval;

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- the required approval of the holders of at least two-thirds of the shares entitled to vote at an election of directors to adopt, amend or repeal our bylaws or repeal the provisions of our restated certificate of incorporation regarding the election and removal of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- the requirement that a special meeting of stockholders may be called only by the chairman of the board of directors, the chief executive officer, the president or the board of directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and
- advance notice procedures that stockholders must comply with in order to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter 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 us.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the General Corporation Law of the State of Delaware, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner. Furthermore, our restated certificate of incorporation that will become effective upon the closing of this offering specifies that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for most legal actions involving actions brought against us by stockholders. We believe this provision benefits us by providing increased consistency in the application of Delaware law by chancellors particularly experienced in resolving corporate disputes, efficient administration of cases on a more expedited schedule relative to other forums and protection against the burdens of multi-forum litigation. However, the provision may have the effect of discouraging lawsuits against our directors and officers. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that, in connection with any applicable action brought against us, a court could find the choice of forum provisions contained in our restated certificate of incorporation to be inapplicable or unenforceable in such action.

Because we do not anticipate paying any cash dividends on our capital stock in the foreseeable future, capital appreciation, if any, will be your sole source of gain.

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all of our future earnings, if any, to finance the operation and expansion of our business. Therefore, you should not rely on an investment in our common stock as a source for any future dividend income.

Our board of directors has significant discretion as to whether to distribute dividends. Even if our board of directors decides to declare and pay dividends, the timing, amount and form of future dividends, if any, will depend on, among other things, our future results of operations and cash flow, our capital requirements and surplus, our financial condition, contractual restrictions and other factors deemed relevant by our board of directors. Accordingly, the return on your investment in our common stock will likely depend entirely on any future capital appreciation, if any, of our common stock. There is no guarantee that our common stock will appreciate in value or even maintain the price at which you purchased our common stock. See "Dividend Policy."

Our ability to use net operating losses and research and development credits to offset future taxable income may be subject to certain limitations.

As of December 31, 2017, we had federal and state net operating loss carryforwards of \$50.2 million and \$41.9 million, respectively, which begin to expire at various dates through 2037. As of December 31, 2017, we also had federal research and development tax credit carryforwards of \$0.8 million and state research and

development tax credit carryforwards of \$0.5 million, which begin to expire in 2030. These net operating loss and tax credit carryforwards could expire unused and be unavailable to offset future income tax liabilities. In addition, in general, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code, a corporation that undergoes an “ownership change” is subject to limitations on its ability to utilize its pre-change net operating losses or tax credits, or NOLs or credits, to offset future taxable income or taxes. For these purposes, an ownership change generally occurs where the aggregate stock ownership of one or more stockholders or groups of stockholders who owns at least 5% of a corporation’s stock increases its ownership by more than 50 percentage points over its lowest ownership percentage within a specified testing period. Our existing NOLs or credits may be subject to limitations arising from previous ownership changes, and if we undergo an ownership change in connection with or after this offering, our ability to utilize NOLs or credits could be further limited by Sections 382 and 383 of the Code. In addition, future changes in our stock ownership, many of which are outside of our control, could result in an ownership change under Sections 382 and 383 of the Code. Our NOLs or credits may also be impaired under state law. Accordingly, we may not be able to utilize a material portion of our NOLs or credits. The reduction of the corporate tax rate under the Tax Cuts and Jobs Act of 2017, or the TCJA, may cause a reduction in the economic benefit of our net operating loss carryforwards and other deferred tax assets available to us. Furthermore, under the TCJA, although the treatment of tax losses generated before December 31, 2017 has generally not changed, tax losses generated in calendar year 2018 and beyond will only be able to offset 80% of taxable income. This change may require us to pay federal income taxes in future years despite generating a loss for federal income tax purposes in prior years.

Recent U.S. tax legislation may materially adversely affect our financial condition, results of operations and cash flows.

Recently-enacted U.S. tax legislation has significantly changed the U.S. federal income taxation of U.S. corporations, including by reducing the U.S. corporate income tax rate, limiting interest deductions, modifying or repealing many business deductions and credits (including reducing the business tax credit for certain clinical testing expenses incurred in the testing of certain drugs for rare diseases or conditions generally referred to as “orphan drugs”), adopting elements of a territorial tax system, imposing a one-time transition tax, or repatriation tax, on all undistributed earnings and profits of certain U.S.-owned foreign corporations, revising the rules governing net operating losses and the rules governing foreign tax credits, and introducing new anti-base erosion provisions. Many of these changes are effective immediately, without any transition periods or grandfathering for existing transactions. The legislation is unclear in many respects and could be subject to potential amendments and technical corrections, as well as interpretations and implementing regulations by the Treasury and Internal Revenue Service, or the IRS, any of which could lessen or increase certain adverse impacts of the legislation. In addition, it is unclear how these U.S. federal income tax changes will affect state and local taxation, which often uses federal taxable income as a starting point for computing state and local tax liabilities.

While some of the changes made by the tax legislation may adversely affect us in one or more reporting periods and prospectively, other changes may be beneficial on a going forward basis. We continue to work with our tax advisors and auditors to determine the full impact that the recent tax legislation as a whole will have on us. We urge our investors to consult with their legal and tax advisors with respect to such legislation.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations and financial position, business strategy, prospective products, product approvals, research and development costs, timing and likelihood of success, plans and objectives of management for future operations and future results of anticipated products, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “contemplate,” “believe,” “estimate,” “predict,” “potential” or “continue” or the negative of these terms or other similar expressions. The forward-looking statements in this prospectus are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements speak only as of the date of this prospectus and are subject to a number of risks, uncertainties and assumptions described under the sections in this prospectus entitled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and elsewhere in this prospectus. These forward-looking statements are subject to numerous risks, including, without limitation, the following:

- our status as a development-stage company and our expectation to incur losses in the future;
- our future capital needs and our need to raise additional funds;
- our ability to build a pipeline of product candidates and develop and commercialize drugs;
- our unproven approach to therapeutic intervention;
- our ability to enroll patients and volunteers in clinical trials, timely and successfully complete those trials and receive necessary regulatory approvals;
- our ability to establish our own manufacturing facilities and to receive or manufacture sufficient quantities of our product candidates;
- our ability to protect and enforce our intellectual property rights;
- federal, state, and foreign regulatory requirements, including FDA regulation of our product candidates;
- the timing of clinical trials and the likelihood of regulatory filings and approvals;
- our ability to obtain and retain key executives and attract and retain qualified personnel; and
- our ability to successfully manage our growth.

Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not occur or be achieved, and actual results could differ materially from those projected in the forward-looking statements. Moreover, we operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement relating to this offering completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

MARKET INDUSTRY AND OTHER DATA

The prospectus contains estimates, projections and other information concerning our industry, our business and the markets for certain drugs, including data regarding the estimated size of those markets and their projected growth rates. Information that is based on estimates, forecasts, projections or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances reflected in this information. We obtained the industry, market and competitive position data in this prospectus from our own internal estimates and research as well as from industry and general publications and research, surveys and studies conducted by third parties. Industry publications, studies and surveys generally state that they have been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. While we believe that each of these studies and publications is reliable, we have not independently verified market and industry data from third-party sources. While we believe our internal company research as to such matters is reliable and the market definitions are appropriate, neither such research nor these definitions have been verified by any independent source.

USE OF PROCEEDS

We estimate that the net proceeds from our sale of _____ shares of our common stock in this offering will be approximately \$ _____ million, assuming an initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters' over-allotment option to purchase additional shares from us is exercised in full, we estimate that our net proceeds will be \$ _____ million, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$ _____ per share would increase (decrease) the net proceeds to us from this offering by approximately \$ _____ 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 the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each increase (decrease) of 1,000,000 in the number of shares we are offering would increase (decrease) the net proceeds to us from this offering, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, by \$ _____ million, assuming the assumed initial public offering price remains the same.

We currently anticipate that we will use the net proceeds from this offering, together with \$ _____ million of cash on hand, as follows:

- approximately \$ _____ million to fund proof of concept clinical trials in our inflammatory diseases programs;
- approximately \$ _____ million to fund proof of concept clinical trials in our oncology programs;
- approximately \$ _____ million to invest in our platform and to advance additional preclinical development activities; and
- the remainder to fund working capital and other general corporate purposes.

The 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 to be received upon the closing of this offering or the amounts that we will actually spend on the uses set forth above. Predicting the cost necessary to develop product candidates can be difficult and we anticipate that we will need additional funds to complete the development of any product candidates we identify. The amounts and timing of our actual use of proceeds may vary significantly depending on numerous factors. See "Risk Factors—Risks Related to Our Common Stock and this Offering—We have broad discretion in the use of the net proceeds from this offering and may not use them effectively."

We may also use a portion of the net proceeds to in-license, acquire or invest in additional businesses, technologies, products or assets, although currently we have no specific agreements, commitments or understandings in this regard.

Based on our planned use of the net proceeds of this offering and our current cash and cash equivalents, we estimate that such funds will be sufficient to enable us to fund our operating expenses and capital expenditure requirements through _____. We have based this estimate on assumptions that may prove to be incorrect, and we could use our available capital resources sooner than we currently expect.

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations, strategic alliances and licensing arrangements. With the exception of our existing debt arrangement, we do not have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt

securities, the ownership interests of our existing stockholders may be diluted, and the terms of these securities may include liquidation or other preferences that could adversely affect the rights of our common stockholders. Additional debt financing, if available, may involve agreements that include restrictive covenants that limit our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends, that could adversely impact our ability to conduct our business.

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

Pending our use of the net proceeds from this offering, we intend to invest the net proceeds in a variety of capital preservation investments, including short-term, investment-grade, interest-bearing securities, certificates of deposit or U.S. government securities.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain future earnings, if any, to finance the operation and expansion of our business and do not anticipate paying any dividends in the foreseeable future. Any future determination related to our dividend policy will be made at the discretion of our board of directors after considering our financial condition, results of operations, capital requirements, business prospects and other factors the board of directors deems relevant, and subject to the restrictions contained in any contractual financing arrangements. In addition, the terms of our existing loan and security agreement with Pacific Western Bank preclude us from paying dividends on our equity securities without Pacific Western Bank's consent.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of December 31, 2017, as follows:

- on an actual basis;
- on a pro forma basis to reflect:
 - the automatic conversion of all outstanding shares of our preferred stock into _____ shares of common stock upon the closing of this offering;
 - the sale by us of 14,705,884 shares of Series C preferred stock in February 2018 for gross proceeds of \$47.5 million;
 - the outstanding warrants to purchase an aggregate of _____ shares of our preferred stock becoming warrants to purchase _____ shares of our common stock upon the closing of this offering;
 - the automatic cashless exercise of a warrant to purchase _____ shares of common stock, which, based on an assumed initial public offering price of \$ _____ per share, the midpoint of the price range set forth on the cover page of this prospectus, which would result in the issuance of _____ shares of our common stock upon closing of this offering; and
 - the filing and effectiveness of our restated certificate of incorporation, which will occur upon the closing of this offering.
- on a pro forma as adjusted basis to give further effect to our issuance and sale of _____ shares of common stock in this offering at an assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Our capitalization following the closing 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 this information in conjunction 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 and other financial information contained in this prospectus.

	As of December 31, 2017 (in thousands, except share data)		
	<u>Actual</u>	<u>Pro Forma</u>	<u>Pro Forma as Adjusted(1) (unaudited)</u>
Balance Sheet Data:			
Cash and cash equivalents	\$ 38,246		
Preferred stock warrant liability	\$ 424		
Long-term debt	9,966		
Convertible preferred stock (Series A, A-1, A-2, A-3, B and C), \$0.001 par value; 66,311,563 shares authorized, 65,833,096 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	83,702		
Stockholders’ (deficit) equity:			
Preferred stock, \$0.001 par value; no shares authorized, issued or outstanding, actual; no shares authorized and no shares issued or outstanding, pro forma and pro forma as adjusted	—		
Common stock, \$0.001 par value; 97,000,000 shares authorized, 16,880,974 shares issued and 15,829,073 outstanding, actual; _____ shares authorized, _____ shares issued and outstanding, pro forma; _____ shares authorized, _____ shares issued and outstanding, pro forma as adjusted	16		
Additional paid-in capital	1,683		
Accumulated deficit	(56,422)		
Total stockholders’ (deficit) equity	(54,723)		
Total capitalization	<u>\$ 39,369</u>	<u> </u>	<u> </u>

- (1) A \$1.00 increase or decrease in the assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the pro forma as adjusted amount of each of cash and cash equivalents, additional paid-in capital, total stockholders' (deficit) equity and total capitalization by approximately \$ 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 the estimated underwriting discounts and commissions and estimated expenses payable by us. An increase or 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 or decrease the pro forma as adjusted amount of each of cash and cash equivalents, additional paid-in capital, total stockholders' (deficit) equity and total capitalization by approximately \$ million, assuming no change in the assumed initial public offering price per share and after deducting the estimated underwriting discounts and commissions and estimated expenses payable by us.

If the underwriters' over-allotment option to purchase additional shares is exercised in full, pro forma as adjusted amount of each of cash and cash equivalents, additional paid-in capital, total stockholders' (deficit) equity and total capitalization as of , 2018 would be \$, \$, and .

The table above includes shares of unvested restricted stock subject to repurchase and excludes:

- shares of common stock issuable upon the exercise of stock options outstanding as of 2018, at a weighted average exercise price of \$ per share;
- shares of common stock reserved for future issuance under the 2015 Plan as of , 2018;
- shares of common stock issuable upon the exercise of warrants to purchase shares of preferred stock that will become warrants to purchase common stock, at a weighted average exercise price of \$ per share, upon the closing of this offering;
- shares of common stock issuable upon the exercise of stock options to be granted in connection with this offering under the 2018 Plan to certain of our directors, executive officers and employees, at an exercise price per share equal to the public offering price in this offering;
- additional shares of our common stock reserved for future issuance under the 2018 Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under the 2018 Plan, as well as shares of our common stock that become available pursuant to provisions in the 2018 Plan that automatically increase the share reserve under the 2018 Plan as described in "Executive and Director Compensation—Incentive Plans—2018 Incentive Award Plan"; and
- shares of our common stock that will become available for future issuance under the 2018 ESPP, which will become effective in connection with this offering, as well as shares of our common stock that become available pursuant to provisions in the 2018 ESPP that automatically increase the share reserve under the 2018 ESPP as described in "Executive and Director Compensation—Incentive Plans—2018 Employee Stock Purchase Plan."

DILUTION

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

As of December 31, 2017, our historical net tangible book value was approximately \$29.0 million, or \$1.83 per share of common stock. Our historical net tangible book value per share represents total tangible assets less total liabilities, divided by the number of shares of our common stock outstanding as of December 31, 2017.

Our pro forma net tangible book value as of December 31, 2017 was approximately \$ million, or \$ per share. Pro forma net tangible book value represents the amount of our total tangible assets less total liabilities, after giving effect to (1) the sale by us of 14,705,884 shares of Series C preferred stock in February 2018 for gross proceeds of \$47.5 million, (2) the automatic conversion of all shares of our preferred stock outstanding as of December 31, 2017 into an aggregate of shares of our common stock upon the closing of this offering, (3) the automatic cashless exercise of a warrant to purchase shares of common stock, which, based on an assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, would result in the issuance of shares of our common stock upon the closing of this offering and (4) the outstanding warrants to purchase shares of our preferred stock becoming warrants to purchase shares of our common stock upon the closing of this offering. Pro forma net tangible book value per share represents our pro forma net tangible book value divided by the total number of shares outstanding as of December 31, 2017, after giving effect to the pro forma adjustment described above.

After giving further effect to the sale of shares of common stock in this offering at an assumed initial public offering price of \$ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of December 31, 2017 would have been approximately \$ million, or \$ per share. This amount represents an immediate increase in pro forma net tangible book value of \$ per share to our existing stockholders and an immediate dilution of approximately \$ per share to new investors participating in this offering. We determine dilution by subtracting the pro forma as adjusted net tangible book value per share after this offering from the amount of cash that a new investor paid for a share of common stock. The following table illustrates this dilution:

Assumed initial public offering price per share	\$
Historical net tangible book value per share as of December 31, 2017	\$1.83
Increase (decrease) per share attributable to the sale by us of 14,705,884 shares of Series C preferred stock in February 2018, the conversion of our preferred stock, the automatic cashless exercise of a warrant to purchase common stock and warrants to purchase preferred stock becoming warrants to purchase common stock upon the closing of this offering	
Pro forma net tangible book value (deficit) per share as of December 31, 2017	
Increase in pro forma net tangible book value per share attributable to new investors in this offering	
Pro forma as adjusted net tangible book value per share after this offering	\$
Dilution per share to new investors in this offering	\$

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$ 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 approximately \$ million, and dilution in pro forma net tangible book value per share to new investors by approximately \$, assuming that

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the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each increase (decrease) of 1.0 million shares in the number of shares offered by us would increase (decrease) our pro forma as adjusted net tangible book value per share after this offering by \$ per share and decrease (increase) the dilution to new investors by \$ per share, assuming that the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise their over-allotment option to purchase additional shares of our common stock in full, the pro forma as adjusted net tangible book value after this offering would be \$ per share, the increase in pro forma net tangible book value per share would be \$ and the dilution per share to new investors would be \$ per share, in each case assuming an initial public offering price of \$ per share, which is the midpoint of the price range set forth on the cover page of this prospectus.

The following table summarizes the pro forma as adjusted basis, as of December 31, 2017, the differences between the number of shares of common stock purchased from us, the total consideration paid to us in cash and the average price per share paid by existing stockholders and new investors. The calculation below is based on an assumed initial public offering price of \$ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders		%	\$	%	\$
New investors					
Total		100.0%		100.0%	\$

A \$1.00 increase (decrease) in the assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the total consideration paid to us by investors in this offering by \$ million and, in the case of an increase, would increase the percentage of total consideration paid to us by investors in this offering by percentage points and, in the case of a decrease, would decrease the percentage of total consideration paid to us by investors in this offering by 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 to us by investors in this offering by \$ million and, in the case of an increase, would increase the percentage of total consideration paid to us by investors in this offering by percentage points and, in the case of a decrease, would decrease the percentage of total consideration paid to us by investors in this offering by percentage points, assuming no change in the assumed initial public offering price.

The foregoing tables and calculations are based on the number of shares of our common stock outstanding as of December 31, 2017 (which includes shares of issued but unvested restricted stock subject to repurchase), and excludes:

- shares of common stock issuable upon exercise of stock options outstanding as of December 31, 2017, at a weighted-average exercise price of \$ per share;
- shares of common stock issuable upon the exercise of warrants to purchase preferred stock that will become warrants to purchase common stock, at a weighted average exercise price of \$ per share, upon the closing of this offering
- shares of common stock reserved for future issuance under the 2015 Plan as of December 31, 2017;

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- shares of common stock issuable upon the exercise of stock options to be granted in connection with this offering under the 2018 Plan to certain of our directors, executive officers and employees, at an exercise price per share equal to the public offering price in this offering;
- additional shares of our common stock reserved for future issuance under the 2018 Plan as well as shares of our common stock that become available pursuant to provisions in the 2018 Plan that automatically increase the share reserve under the 2018 Plan as described in “Executive and Director Compensation—Incentive Plans—2018 Incentive Award Plan”; and
- shares of our common stock that will become available for future issuance under the 2018 ESPP, as well as shares of our common stock that become available pursuant to provisions in the 2018 ESPP that automatically increase the share reserve under the 2018 ESPP as described in “Executive and Director Compensation—Incentive Plans—2018 Employee Stock Purchase Plan.”

The foregoing discussion and tables also assume no exercise of any options or warrants outstanding as of December 31, 2017. To the extent any of these outstanding options or warrant is exercised, there will be further dilution to new investors. If all of such outstanding options and warrant had been exercised as of December 31, 2017, the pro forma as adjusted net tangible book value per share after this offering would be \$, and total dilution per share to new investors would be \$.

If the underwriters exercise their over-allotment option to purchase additional shares of our common stock in full:

- the percentage of shares of common stock held by existing stockholders will decrease to approximately % of the total number of shares of our common stock outstanding after this offering; and
- the number of shares held by new investors will increase to , or approximately % of the total number of shares of our common stock outstanding after this offering.

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 year ended December 31, 2017 and 2016 and the consolidated balance sheet data as of December 31, 2017 and 2016 from our audited consolidated financial statements appearing at the end of this prospectus. Our historical results are not necessarily indicative of the results that should be expected in the future.

	Year Ended December 31,	
	2017	2016
	(in thousands, except share and per share amounts)	
Statement of Operations Data:		
Operating expenses:		
Research and development	\$ 19,957	\$ 9,134
General and administrative	7,574	3,891
Total operating expenses	27,531	13,025
Loss from operations	(27,531)	(13,025)
Other (expense) income:		
Interest expense, net	(215)	(287)
Other expenses	(301)	(20)
Other income (expense), net	(516)	(307)
Net loss	\$ (28,047)	\$ (13,332)
Convertible preferred stock dividends	(6,085)	(1,645)
Net loss attributable to common stockholders	\$ (34,132)	\$ (14,977)
Net loss per share attributable to common stockholders, basic and diluted(1)	\$ (2.23)	\$ (1.30)
Weighted average number of common shares outstanding, basic and diluted(1)	15,299,527	11,562,889
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited) (2)	\$ (0.36)	
Pro forma weighted average common shares outstanding, basic and diluted (unaudited)(2)	76,717,860	
	As of December 31, 2017	As of December 31, 2016
Balance Sheet Data:		
Cash and cash equivalents	\$ 38,246	\$ 15,536
Working capital(3)	34,938	13,472
Total assets	43,788	18,570
Long-term debt	9,966	9,931
Preferred stock warrant liability	424	123
Convertible preferred stock	83,702	33,863
Accumulated deficit	(56,422)	(28,352)
Total stockholders' (deficit) equity	(54,723)	(28,337)

- (1) See Note 2 to our audited 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.
- (2) See Note 13 to our audited consolidated financial statements appearing at the end of this prospectus for further details on the calculation of our unaudited basic and diluted pro forma net loss per share attributable to common stockholders.
- (3) 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 the following discussion and analysis of financial condition and results of operations together with the section titled "Selected Consolidated Financial Data" and our consolidated financial statements and related notes included elsewhere in this prospectus. This discussion and other parts of this prospectus contain forward-looking statements that involve risks and uncertainties, such as statements regarding our plans, objectives, expectations, intentions and projections. Our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the "Risk Factors" section of this prospectus.

Overview

Evelo Biosciences is pioneering the development of therapies designed to act on the gut-body network. The action of our therapies is based on our growing understanding of the central role of the gut in controlling immune and biological activity throughout the body. The gut-body network represents the connections of the gut to all organs and tissues, which enables the gut to exert a significant level of control over the body's immune and biological systems. The centrality of the gut-body network to the immune system has only recently become appreciated, and modern medicine and drug discovery have largely overlooked the importance of the gut-body network in fighting disease. We believe that we have the potential to use the unexplored biology of the gut-body network to develop a new class of therapies that could transform the treatment of many major diseases, potentially driving profound benefits to patients and society.

The gut, or the gastrointestinal tract, is the largest part of the immune system and is a central hub of the body's network of lymphatic vessels. Immune cells from around the body circulate via these lymphatic vessels through tissues of the gut, where they are conditioned by exposure to many antigens and immunomodulatory agents that continuously pass through the gut. These conditioned immune cells then continue to travel throughout the body and can impact disease and health at all sites of the body. Microbes, in particular, have the ability to condition immune cells in the gut.

We are developing orally-delivered pharmaceutical compositions of specific strains of naturally-occurring microbes derived from a single clone, which we refer to as monoclonal microbials. Our monoclonal microbials are designed to act on the gut-body network. We and our collaborators have observed in preclinical studies that our monoclonal microbials can downregulate or upregulate immune responses throughout the body by acting on the gut-body network with naturally-evolved pharmacology. We believe that monoclonal microbials exert their effects through interactions with host immune cells as they pass through the gut. We have observed in preclinical animal models that our monoclonal microbials neither circulate throughout the body nor colonize the gut. These properties of monoclonal microbials could present significant potential advantages over existing therapies, including safety, efficacy and convenience.

We were incorporated and commenced operations in 2014. Since our incorporation, we have devoted substantially all of our resources to developing our preclinical candidates, building our intellectual property portfolio and process development and manufacturing function, business planning, raising capital and providing general and administrative support for these operations. To date, we have financed our operations primarily with proceeds from sales of our convertible preferred stock and borrowings under a loan and security agreement, as amended, with Pacific Western Bank, or the loan and security agreement. Through December 31, 2017, we had received gross proceeds of \$85.4 million from such transactions. In February 2018, we raised approximately \$47.5 million from the sale of our Series C preferred stock and drew the remaining \$5.0 million of available under our loan and security agreement.

On June 16, 2016, we acquired Epiva Biosciences, Inc., or Epiva, a privately held research company focused on microbes for inflammatory disease, in order to create synergies and expand the depth of our research platform.

Epiva held intellectual property rights related to microbes affecting inflammatory diseases. The acquisition resulted in the exchange of all shares of Epiva stock for shares of our stock at an exchange rate of 1-for-0.8333. The holders of Epiva common stock and common stock options received shares of the our common stock or options. The holders of Epiva Series A and A-2 Preferred Stock received shares of our Series A-1 and A-3 Preferred Stock, respectively. Both we and Epiva received funding from various investment funds that are managed by the same entity. We assessed the ownership structure of the two companies as well as the investment funds and determined, based on the ownership structure and other rights provided through other relevant arrangements, such as voting rights agreements, limited partnership agreements and general partnership agreements, that the ultimate controlling parent of each of Evelo and Epiva was the same entity both immediately before and immediately after the acquisition. As a result, we and Epiva were considered to be under common control. The net assets received by us as a result of the acquisition were determined to represent an asset and not a business. This conclusion was primarily based on the fact that substantially all of the fair value of the gross assets received, excluding cash acquired, related to Epiva's intellectual property rights. This conclusion considered the nature of Epiva's operations immediately prior to the acquisition as well as Epiva's limited operating history.

We are a development stage company and have not generated any revenue. All of our product candidates are still in preclinical development. Our ability to generate product revenue sufficient to achieve profitability will depend heavily on the successful development and eventual commercialization of one or more of our product candidates. Since our inception, we have incurred significant operating losses. For the year ended December 31, 2017, our net loss was \$28.0 million. As of December 31, 2017, we had an accumulated deficit of \$56.4 million. We do not expect to generate revenue from sales of any products for the foreseeable future, if at all.

We expect that our expenses will increase substantially in connection with our ongoing activities, particularly as we:

- initiate proof of concept clinical trials of EDP1066, EDP1815 and EDP1503;
- advance the clinical development of any additional monoclonal microbial product candidates;
- conduct research and continue preclinical development of potential product candidates;
- make strategic investments in manufacturing capabilities, including potentially planning and building a small-scale commercial manufacturing facility;
- maintain our current intellectual property portfolio and opportunistically acquire complementary intellectual property; and
- seek to obtain regulatory approvals for our product candidates.

In addition, if we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to product manufacturing, marketing, sales and distribution. Furthermore, upon the closing of this offering, we expect to incur additional costs associated with operating as a public company.

As a result, we will need additional financing to support our continuing operations. Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of public or private equity or debt financings or other sources, which may include collaborations with third parties. Adequate additional financing may not be available to us on acceptable terms, or at all. Our inability to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy. We will need to generate significant revenue to achieve profitability, and we may never do so.

Because of the numerous risks and uncertainties associated with drug development, we are unable to 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 revenue from 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 December 31, 2017, we had cash and cash equivalents of \$38.2 million. In February 2018, we raised approximately \$47.5 million from the sale of our Series C preferred stock and drew the remaining \$5.0 million of available under our loan and security agreement. We expect that our existing cash and cash equivalents together with the proceeds from the sale of our Series C preferred stock and anticipated net proceeds from this offering, will enable us to fund our operating expenses and capital expenditure requirements through . We have based these estimates on assumptions that may prove to be wrong, and we may use our available capital resources sooner than we currently expect. See “—Liquidity and Capital Resources.”

Financial Operations Overview

Revenue

We have not generated any revenue since our inception and do not expect to generate any revenue from the sale of products in the near future if at all. If our development efforts for our current product candidates or additional product candidates that we may develop in the future are successful and result in marketing 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 such collaboration or license agreements.

Operating Expenses

Our operating expenses since inception have consisted primarily of research and development activities 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 our product candidates, which include:

- expenses incurred under agreements with third parties, including contract research organizations, or CROs, that conduct research, preclinical activities and clinical trials on our behalf as well as contract manufacturing organizations, or CMOs, that manufacture drug substance and drug product for use in our preclinical and any future clinical trials;
- expenses to acquire technologies to be used in research and development;
- salaries, benefits and other related costs, including stock-based compensation expense, for personnel in our research and development functions;
- costs of outside consultants, including their fees, stock-based compensation and related travel expenses;
- the cost of laboratory supplies and acquiring, developing and manufacturing preclinical study and clinical trial materials;
- costs related to compliance with regulatory requirements; 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 vendors and our clinical investigative sites. 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 financial statements as prepaid or

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accrued research and development expenses. Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are deferred and capitalized, even when there is no alternative future use for the research and development. The capitalized amounts are expensed as the related goods are delivered or the services are performed.

Our primary focus of research and development since inception has been building a platform to enable us to develop medicines based on an understanding of the gut-body network and to show potential clinical utility. Our platform and program expenses consist principally of costs, such as preclinical research, preclinical manufacturing activity costs, licensing expense as well as an allocation of certain indirect costs, facility costs and depreciation expense. We do not allocate personnel costs, which include salaries, discretionary bonus and stock-based compensation costs, as such costs are separately classified as research and development personnel costs.

The table below summarizes our research and development expenses incurred on our platform and by product development program (in thousands):

	Year Ended December 31,	
	2017	2016
Gut-body network platform expenses	\$ 3,806	\$ 2,064
Inflammation programs	4,284	—
Oncology programs	3,706	2,581
Other program expenses	566	393
Research and development personnel costs (including stock-based compensation)	7,595	4,096
Total research and development expenses	<u>\$ 19,957</u>	<u>\$ 9,134</u>

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 in the foreseeable future as we initiate clinical trials for certain product candidates, including EDP1066, EDP1815 and EDP1503, and continue to discover and develop additional product candidates, build manufacturing capabilities and expand into additional therapeutic areas.

At this time, we cannot reasonably estimate or know the nature, timing and estimated costs of the efforts that will be necessary to complete the development of, and obtain regulatory approval for, any of our product candidates. We are also unable to predict when, if ever, material net cash inflows will commence from sales or licensing of our product candidates. This is due to the numerous risks and uncertainties associated with drug development, including the uncertainty of:

- our ability to add and retain key research and development personnel;
- our ability to establish an appropriate safety profile with Investigational New Drug-enabling toxicology studies;
- our ability to successfully develop, obtain regulatory approval for, and then successfully commercialize, our product candidates;
- our successful enrollment in and completion of clinical trials;
- the costs associated with the development of any additional product candidates we identify in-house or acquire through collaborations;
- our ability to discover, develop and utilize biomarkers to demonstrate target engagement, pathway engagement and the impact on disease progression of our product candidates;
- our ability to establish and maintain agreements with third-party manufacturers for clinical supply for our clinical trials and commercial manufacturing, if our product candidates are approved;
- the terms and timing of any collaboration, license or other arrangement, including the terms and timing of any milestone payments thereunder;

- our ability to obtain and maintain patent, trade secret and other intellectual property protection and regulatory exclusivity for our product candidates if and when approved;
- our receipt of marketing approvals from applicable regulatory authorities;
- our ability to commercialize products, if and when approved, whether alone or in collaboration with others; and
- the continued acceptable safety profiles of the product candidates following approval.

A change in any of these variables with respect to the development of any of our product candidates would significantly change the costs, timing and viability associated with the development of that product candidate. We expect our research and development expenses to increase at least over the next several years as we continue to implement our business strategy, advance our current programs, expand our research and development efforts, seek regulatory approvals for any product candidates that successfully complete clinical trials, identify and develop additional product candidates and incur expenses associated with hiring additional personnel to support our research and development efforts.

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 legal fees relating to patent and corporate matters; professional fees for accounting, auditing, tax and administrative consulting services; insurance costs; administrative 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 anticipate that our general and administrative expenses will increase in the future as we increase our headcount to support the expected growth in our research and development activities and the potential commercialization of our product candidates. We also expect to incur increased expenses associated with being a public company, including increased 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.

Interest Expense, Net

Interest expense, net consists of interest expense incurred on our debt, net of interest earned on our cash and cash equivalents. During the years ended December 31, 2017 and 2016, interest expense, net consisted primarily of interest at the stated rate on borrowings under our loan and security agreement, amortization of deferred financing costs and interest expense related to the accretion of debt discount associated with the loan and security agreement.

Other Expenses

Other expenses primarily consists of non-cash changes in the fair value of warrants issued in connection with our loan and security agreement, after which it will no longer be remeasured at fair value.

Income Taxes

Since our inception in 2014, we have not recorded any U.S. federal or state income tax benefits for the net losses we have incurred in each year or our earned research and development tax credits, due to our uncertainty of realizing a benefit from those items. As of December 31, 2017, we had federal and state net operating loss carryforwards of \$50.2 million and \$41.9 million, respectively, both of which expire at various dates through 2037. As of December 31, 2017, we also had federal and state research and development tax credit carryforwards of \$0.8 million and \$0.5 million respectively, both of which begin to expire in 2030.

Results of Operations

Comparison of Years Ended December 31, 2017 and 2016

The following table summarizes our results of operations for the years ended December 31, 2017 and 2016 (in thousands):

	Year Ended December 31,		
	2017	2016	Increase/(Decrease)
Operating expenses:			
Research and development	\$ 19,957	\$ 9,134	\$ 10,823
General and administrative	7,574	3,891	3,683
Total operating expenses	27,531	13,025	14,506
Loss from operations	(27,531)	(13,025)	14,506
Other (expense) income:			
Interest expense, net	(215)	(287)	(72)
Other expense	(301)	(20)	281
Other income (expense), net	(516)	(307)	209
Net loss	<u>\$ (28,047)</u>	<u>\$ (13,332)</u>	<u>\$ 14,715</u>

Research and Development Expenses (in thousands):

	Year Ended December 31,		
	2017	2016	Increase/(Decrease)
Gut-body network platform expenses	\$ 3,806	\$ 2,064	\$ 1,742
Inflammation programs	4,284	—	4,284
Oncology programs	3,706	2,581	1,125
Other program expenses	566	393	173
Research and development personnel costs (including stock-based compensation)	7,595	4,096	3,499
Total research and development expenses	<u>\$ 19,957</u>	<u>\$ 9,134</u>	<u>\$ 10,823</u>

Research and development expenses were \$20.0 million for the year ended December 31, 2017, compared to \$9.1 million for the year ended December 31, 2016. The increase of \$10.8 million was due primarily to an increase of \$4.3 million in costs for our inflammation programs, including the external preclinical research, preclinical manufacturing activity costs and licensing expense, an increase of \$1.7 million in platform expense due to the overall growth of the research and development departments in-line with our growth, an increase of \$1.1 million in costs for the oncology programs, primarily due to increases in external preclinical research and preclinical manufacturing activity in 2017, and an increase of \$3.5 million in personnel costs, including increases in salaries and bonus of \$2.4 million and increases in other headcount expenses to support research and development activity. We expect that our research and development expenses will continue to increase in the foreseeable future as we anticipate the initiation of clinical trials for certain product candidates, including EDP1066, EDP1815 and EDP1503, and continue discovery and development efforts for additional product candidates, seek to increase manufacturing capabilities and possibly expand into additional therapeutic areas.

General and Administrative Expenses (in thousands):

	Year Ended December 31,		
	2017	2016	Increase/(Decrease)
General and administrative personnel costs (including stock-based compensation)	\$ 3,237	\$ 2,035	\$ 1,202
Professional fees	2,758	826	1,932
Facility costs, office expense and other	1,579	1,030	549
Total general and administrative expenses	<u>\$ 7,574</u>	<u>\$ 3,891</u>	<u>\$ 3,683</u>

General and administrative expenses were \$7.6 million for the year ended December 31, 2017, compared to \$3.9 million for the year ended December 31, 2016. The increase of \$3.7 million was primarily due to an increase of \$1.9 million in professional fees, including legal, patent and other professional consulting fees related to business development and an increase of \$1.2 million in personnel costs, including an increase of \$0.5 million in stock-based compensation expense and \$0.4 million in salaries and bonus. The remaining increase was related to recruiting, benefits and other various expenses.

Other Income (Expense), Net

Other income (expense), net for the year ended December 31, 2017 was an expense of \$(0.5) million, compared to an expense of \$(0.3) million for the year ended December 31, 2016. This overall increase was driven by a \$0.3 million increase in other expense as a result of an increase in the fair value of the warrants as well as an increase in interest paid on long-term debt, which payments began during August 2016. This was partially offset by an increase in interest income of \$0.1 million from the larger cash balance in 2017.

Liquidity and Capital Resources

To date, we have financed our operations primarily with proceeds from sales of our convertible preferred stock and borrowings under the loan and security agreement. From our inception through December 31, 2017, we had received gross proceeds of \$85.4 million from such transactions, including \$10.0 million borrowed under the loan and security agreement. As of December 31, 2017, we had cash and cash equivalents of \$38.2 million and an accumulated deficit of \$56.4 million.

In connection with the acquisition of Epiva, we assumed Epiva's credit facility and the related \$3.0 million of outstanding debt. In August 2016, we amended the loan and security agreement to allow us to borrow up to \$15.0 million, including the \$3.0 million that was outstanding on the modification date, and extending the maturity date to August 15, 2020. During 2016, we borrowed an additional \$7.0 million, bringing the total amounts outstanding as of December 31, 2016 and 2017 to \$10.0 million. Under the terms of the loan and security agreement, we are required to make interest only payments through August 15, 2018. Upon the expiration of the interest only period, amounts borrowed will be repaid over 24 equal monthly payments of principal plus interest accrued through August 15, 2020. As of December 31, 2017, the amounts outstanding under the loan and security agreement had an interest rate of the higher of (i) prime plus 0.25% or (ii) 3.75% per annum. The loan is secured by a lien on all of our assets, excluding intellectual property.

In February 2018, we drew the additional \$5.0 million available under the loan and security agreement. This resulted in an increase to the interest rate to the higher of (i) prime plus 0.25% or (ii) 4.50% per annum. The interest only payment period was extended to August 15, 2019. Upon the expiration of the interest only period, amounts borrowed will be repaid over 24 equal monthly payments of principal plus interest accrued through August 15, 2021. We may prepay the outstanding loan at its option with a prepayment fee of 2% of principal amount if prepayment is made before August 15, 2018 or 0.5% if the prepayment is made between August 15, 2018 and August 15, 2019.

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There are no financial covenants associated with the agreement. The agreement contains negative covenants restricting our activities, including limitations on cash deposits, dispositions, mergers or acquisitions, incurring indebtedness or liens, paying dividends or making investments and certain other business transactions. The obligations under the agreement are subject to acceleration upon the occurrence of specified events of default, including a material adverse change in our business, operations or financial or other condition.

In connection with entering into the prior loan and security agreement, in November 2015, we issued Comerica Bank a warrant to purchase 100,000 shares of our Series A preferred stock at an exercise price of \$0.60 per share. In connection with entering into the loan and security agreement, in August 2016, we issued Pacific Western Bank a warrant to purchase 62,497 shares of Series A-1 preferred stock at an exercise price of \$0.60 per share and a warrant to purchase 31,248 shares of Series A-3 preferred stock at an exercise price of \$1.20 per share. In connection with the execution of the third amendment to the loan and security agreement, in February 2018, we issued Pacific Western Bank a warrant to purchase 34,722 shares of Series B preferred stock at an exercise price of \$1.80 per share.

Cash Flows

The following table summarizes our sources and uses of cash for each of the periods presented (in thousands):

	Year Ended December 31,	
	2017	2016
Cash used in operating activities	\$ (23,265)	\$ (12,314)
Cash (used in)/provided by investing activities	(1,742)	9,263
Cash provided by financing activities	48,967	15,742
Net increase in cash, cash equivalents and restricted cash	<u>\$ 23,960</u>	<u>\$ 12,691</u>

Operating Activities

Net cash used in operating activities for the year ended December 31, 2017, was \$23.3 million primarily due to our net loss of \$28.0 million. This was partially offset by non-cash charges, including stock-based compensation expense of \$1.5 million, depreciation expense of \$0.8 million, change in fair value of warrant liability of \$0.3 million and change in working capital of \$2.2 million.

Net cash used in operating activities for the year ended December 31, 2016, was \$12.3 million, primarily due to our net loss of \$13.3 million. This was partially offset by non-cash charges, including stock-based compensation expense of \$0.4 million, depreciation of \$0.5 million and change in working capital of \$0.1 million.

Investing Activities

Net cash used in investing activities for the year ended December 31, 2017, was \$1.7 million, primarily due to the purchase of capital equipment during the period.

Net cash provided by investing activities for the year ended December 31, 2016, was \$9.2 million, which consisted of \$10.5 million of cash received in the acquisition of Epiva, slightly offset by the purchase of capital equipment of \$1.3 million.

Financing Activities

Net cash provided by financing activities for the year ended December 31, 2017 was \$49.0 million, primarily consisting of net proceeds of \$48.9 million from the issuance of our Series B Preferred Stock.

Net cash provided by financing activities for the year ended December 31, 2016, was \$15.7 million, primarily consisted of net proceeds of \$7.5 million from the issuance of Series A Preferred Stock and Series A-2 Preferred Stock, gross proceeds of \$11.0 million from the issuance of long-term debt, \$1.0 million received as shareholders' payable for Series B Preferred Stock issued in 2017 and \$0.2 million from the exercise of stock options. These were offset by repayment of long-term debt of \$4.0 million.

Funding Requirements

We expect our expenses to increase substantially in connection with our ongoing development activities related to the initiation of clinical studies and preclinical work on additional monoclonal microbial product candidates, which are still in development, and our follow-on therapeutics and other programs. In addition, upon the closing of this offering, we expect to incur additional costs associated with operating as a public company. We anticipate that our expenses will increase substantially if and as we:

- initiate proof of concept clinical trials of EDP1066, EDP1815 and EDP1503;
- advance the clinical development of any additional monoclonal microbial product candidates;
- conduct research and continue preclinical development of potential product candidates;
- make strategic investments in manufacturing capabilities, including potentially planning and building a small-scale commercial manufacturing facility;
- maintain our current intellectual property portfolio and opportunistically acquire complementary intellectual property; and
- seek to obtain regulatory approvals for our product candidates.
- potentially establish a sales, marketing and distribution infrastructure and scale-up manufacturing capabilities to commercialize any products for which we may obtain regulatory approval;
- add clinical, scientific, operational, financial and management information systems and personnel, including personnel to support our product development and potential future commercialization efforts and to support our transition to a public company; and
- experience any delays or encounter any issues with any of the above, including but not limited to failed studies, complex results, safety issues or other regulatory challenges.

We expect that our existing cash and cash equivalents, the proceeds from the sale of our Series C preferred stock together with anticipated net proceeds from this offering, will enable us to fund our operating expenses and capital expenditure requirements through at least . We have based this estimate on assumptions that may prove to be wrong, and we may use our available capital resources sooner than we currently expect. Because of the numerous risks and uncertainties associated with the development of EDP1066, EDP1815 and EDP1503, any additional monoclonal microbial product candidates or any follow-on programs and because the extent to which we may enter into collaborations with third parties for development of these product candidates is unknown, we are unable to estimate the amounts of increased capital outlays and operating expenses associated with completing the research and development of our product candidates. Our future capital requirements for our technology platform or our other programs will depend on many factors, including:

- the progress and results of our proof of concept clinical studies of EDP1066, EDP1815 and EDP1503;
- the cost of manufacturing clinical supplies of our product candidates;
- the scope, progress, results and costs of preclinical development, laboratory testing for any other potential product candidates;
- the costs, timing and outcome of regulatory review of our product candidates;
- the costs and timing of future commercialization activities, including manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;

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- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in businesses, products and technologies, including entering into licensing or collaboration arrangements for product candidates, although we currently have no commitments or agreements to complete any such acquisitions or investments in businesses.

Identifying potential product candidates and conducting preclinical testing 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 and achieve product sales. In addition, our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of products 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 equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Additional debt financing and preferred equity financing, if available, 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 and may require the issuance of warrants, which could potentially dilute your ownership interest. The terms of our existing loan and security agreement with Pacific Western Bank preclude us from paying dividends on our equity securities without Pacific Western Bank's consent.

If we raise additional funds through collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, 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 when needed, we may be required to delay, limit or terminate our product development programs or any future commercialization efforts or grant rights to develop and market product candidates to third parties that we would otherwise prefer to develop and market ourselves.

Contractual Obligations and Commitments

The following table summarizes our contractual obligations at December 31, 2017 and the effect such obligations are expected to have on our liquidity and cash flows in future periods (in thousands):

	Payments Due by Period				
	Total	Less Than 1 Year	1 – 3 Years	4 – 5 Years	More Than 5 Years
Operating lease commitments ⁽¹⁾	\$ 2,952	\$ 997	\$1,855	\$ 100	\$ —
Debt obligations ⁽²⁾	11,248	475	7,608	3,165	—
Total	<u>\$14,200</u>	<u>\$ 1,472</u>	<u>\$9,463</u>	<u>\$3,265</u>	<u>\$ —</u>

- (1) Amounts in the table reflect payments due for our laboratory and office space in Cambridge, Massachusetts under two operating lease agreements that are scheduled to expire in 2020 and 2021.
- (2) Reflects the contractually required principal and interest payments payable pursuant to our loan and security agreement, which was subsequently amended in February 2018.

We enter into contracts in the normal course of business with CROs for clinical trials, preclinical research studies and testing, manufacturing and other services and products for operating purposes. These contracts generally provide for termination upon notice, and therefore we believe that our non-cancelable obligations under these agreements are not material.

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.

Critical Accounting Policies and Use of Estimates

Our consolidated financial statements are prepared in accordance with generally accepted accounting principles, or GAAP, in the United States of America. The preparation of our consolidated financial statements and related disclosures requires us to make estimates and assumptions that affect the reported amount of assets, liabilities, revenue, costs and expenses, and related disclosures. We believe that the estimates and assumptions involved in the accounting policies described below may have the greatest potential impact on our consolidated financial statements and, therefore, consider these to be our critical accounting policies. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions and conditions.

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 costs incurred for the services when we have not yet been invoiced or otherwise notified of the 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 our 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 services on our behalf and preclinical studies and any clinical trials;
- investigative sites or other providers in connection with preclinical studies and any clinical trials;
- vendors in connection with preclinical and clinical development activities; and
- vendors related to product manufacturing, 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 CROs that 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 clinical expense. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of milestones. In accruing service fees, we estimate the time period over which services will be performed, enrollment of patients, number of sites activated 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 our estimate, we adjust the accrual or amount of prepaid expense 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 us reporting amounts that are too high or too low in any particular period. To date, we have not made any material adjustments to our prior estimates of accrued research and development expenses.

Stock-Based Compensation

We measure stock options and other stock-based awards granted to employees and directors based on the fair value on the date of grant and recognize the corresponding compensation expense of those awards, net of estimated forfeitures, over the requisite service period, which is generally the vesting period of the respective award. Generally, we issue stock options and restricted stock awards with only service-based vesting conditions and record the expense for these awards using the straight-line method. We measure stock-based awards granted to consultants and non-employees based on the fair value of the award on the date at which the related service is complete. Compensation expense is recognized over 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 our common stock and updated assumption inputs in the Black-Scholes option-pricing model.

We estimate the fair value of each stock option grant using the Black-Scholes option-pricing model. Use of this model requires that we make assumptions as to the volatility of our common stock, the expected term of our stock options, the risk-free interest rate for a period that approximates the expected term of our stock options, and our expected dividend yield. Because we are currently a private company and lack company-specific historical and implied volatility information, we estimate our expected volatility based on the historical volatility of a group of publicly traded peer companies. We expect to continue to do so until such time as we have adequate historical data regarding the volatility of our traded stock price. We use the simplified method prescribed by SEC Staff Accounting Bulletin No. 107, *Share-Based Payment*, to calculate the expected term of options granted to employees and directors. We base the expected term of options granted to consultants and non-employees on the contractual term of the options. We determine the risk-free interest rate 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 we have never paid cash dividends and do not expect to pay any cash dividends in the foreseeable future.

The assumptions we used to determine the fair value of stock options granted to employees and directors are as follows, presented on a weighted average basis:

	Year Ended December 31,	
	2017	2016
Risk-free interest rate	2.03%	1.33%
Expected term (in years)	6.18	5.66
Expected volatility	79.5%	87.2%
Expected dividend yield	0.00%	0.00%
Fair value of common stock	\$0.61 – 1.99	\$0.12 - 0.61

The assumptions we used to determine the fair value of stock options granted to consultants and non-employees are as follows, presented on a weighted average basis:

	Year Ended December 31,	
	2017	2016
Risk-free interest rate	2.30%	2.35%
Expected term (in years)	9.43	9.51
Expected volatility	78.9%	89.0%
Expected dividend yield	0.00%	0.00%
Fair value of common stock	\$0.61 – 1.99	\$0.12 - 0.61

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These assumptions represented our best estimates, but the estimates involve inherent uncertainties and the application of our judgment.

We recognize compensation expense for only the portion of awards that are expected to vest. In developing a forfeiture rate estimate for pre-vesting forfeitures, we have considered our historical experience of actual forfeitures.

The following table summarizes the classification of our stock-based compensation expenses recognized in our consolidated statements of operations (in thousands):

	Year Ended December 31,	
	2017	2016
Research and development	\$ 849	\$ 205
General and administrative	693	214
Total	<u>\$ 1,542</u>	<u>\$ 419</u>

Determination of the Fair Value of Common Stock

We are a privately held company with no active public market of our common stock. Therefore, our board of directors has estimated the fair value of our common stock at various dates, with input from management, considering our most recently available third-party valuations of common stock and our board of directors' assessment of additional objective and subjective factors that it believed were relevant and which may have changed from the date of the most recent valuation through the date of the grant.

In the absence of a public trading market for our common stock, our determination of the fair value of our common stock was performed using methodologies, approaches and assumptions consistent with the American Institute of Certified Public Accountants' Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*.

For financial statement purposes, we performed common stock valuations, with the assistance of a third-party specialist, at various dates, which resulted in valuations of our common stock of \$0.61 per share as of January 15, 2017, \$0.75 per share as of March 31, 2017, \$1.11 per share as of June 30, 2017, \$1.55 per share as of September 30, 2017 and \$1.99 per share as of December 31, 2017. In addition to these valuations, we 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 shares of preferred stock and the preferential 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 for our product candidates;
- our stage of development and our business strategy;
- external market conditions affecting the biotechnology and pharmaceutical industries;
- trends within the biotechnology and pharmaceutical industries;
- our financial position, including cash and cash equivalents 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 liquidity event, such as an initial public offering ("IPO"), or sale of our company in light of prevailing market conditions; and

- the analysis of IPOs and the market performance of similar companies in the biotechnology and pharmaceutical industries.

There are significant judgments and estimates inherent in these valuations. These judgments and estimates include assumptions regarding our future operating performance, the stage of development of our product candidates, the timing of a potential IPO or other liquidity event and the determination of the appropriate valuation methodology at each valuation date. If we had made different assumptions, our stock-based compensation expense, net loss attributable to common stockholders and net loss per share attributable to common stockholders could have been significantly different.

Once a public trading market for our common stock has been established in connection with the closing 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 restricted stock, as the fair value of our common stock will be determined based on its trading price on The Nasdaq Global Market.

Valuation Methodologies

Our common stock valuations were prepared in accordance with the guidelines in the Practice Aid, which prescribes several valuation approaches for determining the value of an enterprise, such as the cost, market and income approaches, and various methodologies for allocating the value of an enterprise to its capital structure and specifically the common stock

Our common stock valuation of January 15, 2017 was prepared using the back-solve method to calculate the total equity value and the option-pricing method, or OPM, to allocate the total equity value. The back-solve method derives the implied equity value for one type of equity security from a contemporaneous transaction involving another type of security. We used the back-solve method to calculate the total equity value of our company in the January 15, 2017 valuation as we had recently completed convertible preferred stock financings that should be considered in estimating the fair value of our equity per the Practice Aid. Our remaining common stock valuations were performed using the OPM, or a hybrid of the probability-weighted expected return method, or PWERM, and the OPM, which we refer to as the hybrid method. The method selected was based on the availability and the quality of information to develop the assumptions for the methodology.

OPM. 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 exceed the value of the liquidation preferences at the time of a liquidity event, such as a strategic sale or merger. 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 uses the Black-Scholes option-pricing model to price the call options. This model defines the fair values of securities as functions of the current fair value of a company and uses assumptions such as the anticipated timing of a potential liquidity event and the estimated volatility of the equity securities.

PWERM. Under the PWERM methodology, the fair value of common stock is estimated based upon an analysis of future values for the company, 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.

Hybrid Method. The hybrid method is a PWERM where the equity value in one of the scenarios is calculated using an OPM. In the hybrid method used by us, two types of future-event scenarios were considered:

an IPO and a remaining private scenario. The enterprise value for the IPO scenario was determined using a market approach. The enterprise value for the remaining private scenario was determined using the OPM back-solve approach for the March 2017 and February 7, 2018 valuations as we had recently completed a round of financing in our equity securities. The June 30, 2017, September 30, 2017 and December 31, 2017 valuations utilized the guideline IPO method for the IPO scenario and the guideline transactions method under the merger and acquisition, or M&A, scenario to determine the value of the Company. In the IPO scenario, we allocated the value to the various share classes using the direct waterfall approach and under the M&A scenario, we utilized the OPM to allocate the value to the respective share classes. The relative probability of each type of future-event scenario was determined by our board of directors based on an analysis of market conditions at the time, including then-current IPO valuations of similarly situated companies, and expectations as to the timing and likely prospects of the future-event scenarios.

Option Grants

The following table summarizes by grant date the number of shares subject to options granted since January 24, 2017, the per share exercise price of the options, the fair value of common stock underlying the options on the date of grant 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 ⁽¹⁾	Fair Value of Common Stock per Share on Date of Option Grant	Per Share Estimated Fair Value of Options ⁽²⁾⁽³⁾
January 24, 2017	85,900	\$ 0.61	\$ 0.61	\$ 0.43
April 12, 2017	657,000	\$ 0.61	\$ 0.75 ⁽⁴⁾	\$ 0.45
June 15, 2017	1,650,000	\$ 0.61	\$ 1.11 ⁽⁴⁾	\$ 0.87
September 19, 2017	1,345,602	\$ 0.61	\$ 1.55 ⁽⁴⁾	\$ 1.27
October 18, 2017	19,000	\$ 0.61	\$ 1.55 ⁽⁴⁾	\$ 1.27
December 15, 2017	2,006,000	\$ 0.97	\$ 1.99 ⁽⁵⁾	\$ 1.57
December 27, 2017	117,600	\$ 0.97	\$ 1.99 ⁽⁵⁾	\$ 1.57
January 25, 2018	336,000	\$ 0.97	\$ 2.37 ⁽⁶⁾	\$ 1.94

- (1) The Per Share Exercise Price of Options represents the fair value of our common stock on the date of grant, as determined by our board of directors, after taking into account our most recently available contemporaneous valuation of our common stock as well as additional factors that may have changed since the date of such contemporaneous valuation through the date of grant.
- (2) The Per Share Estimated Fair Value of Options reflects the weighted average fair value of options granted on each grant date, determined using the Black-Scholes option-pricing model.
- (3) For purposes of recording stock-based compensation for grants of options to non-employees, 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 option based on the then-current fair value of the option and adjust the expense accordingly. The weighted average fair value amounts presented in this column for grants to employees, directors and consultants and non-employees reflect only the grant-date fair value of options granted to consultants and non-employees and not any subsequently remeasured fair value of those options.
- (4) At the time of the options granted on April 12, 2017, June 15, 2017, September 19, 2017 and October 18, 2017, our board of directors determined that the fair value of our common stock of \$0.61 per share calculated in the contemporaneous valuation as of January 5, 2017 reasonably reflected the per share fair value of our common stock as of the grant dates. However, as described below, the fair value of the common stock at the date of these grants was adjusted to \$0.75, \$1.11, \$1.55 and \$1.55 per share, respectively, in connection with a retrospective fair value assessment for financial reporting purposes.
- (5) At the time of the options granted on December 15, 2017 and December 27, 2017, our board of directors determined that the fair value of our common stock of \$0.97 per share calculated in the contemporaneous valuation as of December 1, 2017 reasonably reflected the per share fair value of our common stock as of the grant dates. However, as described below, the fair value of the common stock at the date of these grants

- was adjusted to \$1.99 per share in connection with a retrospective fair value assessment for financial reporting purposes.
- (6) At the time of the options granted on January 25, 2018, our board of directors determined that the fair value of our common stock of \$0.97 per share calculated in the contemporaneous valuation as of February 7, 2018 reasonably reflected the per share fair value of our common stock as of the grant date. However, as described below, the fair value of the common stock at the date of these grants was adjusted to \$2.37 per share in connection with a retrospective fair value assessment for financial reporting purposes.

Valuation of Warrants to Purchase Convertible Preferred Stock

We classify warrants to purchase shares of our Series A, Series A-1, and Series A-3 and Series B convertible preferred stock as a liability on our balance sheets as this warrant is a free-standing financial instrument exercisable into contingently redeemable shares. The warrant was initially recorded at fair value on the date of grant, and it was subsequently remeasured to fair value at each balance sheet date. Changes in fair value of this warrant are recognized as a component of other income (expense), net in our consolidated statement of operations. We will continue to adjust the liability for changes in fair value until the earlier of the exercise or expiration of the warrant.

We use the Black-Scholes option-pricing model, which incorporates assumptions and estimates, to value the preferred stock warrant. We assess these assumptions and estimates on a quarterly basis as additional information impacting the assumptions is obtained. Estimates and assumptions impacting the fair value measurement include the fair value per share of the underlying convertible preferred stock, the remaining contractual term of the warrant, risk-free interest rate, expected dividend yield and expected volatility of the price of the underlying preferred stock. We determine the fair value per share of the underlying preferred stock by taking into consideration our most recent sales of our convertible preferred stock, results obtained from third-party valuations and additional factors that we deem relevant. We have historically been a private company and lack company-specific historical and implied volatility information of our stock. Therefore, we estimate expected stock volatility based on the historical volatility of publicly traded peer companies for a term equal to the remaining contractual term of the warrant. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve for time periods approximately equal to the remaining contractual term of the warrant. We have estimated a 0% dividend yield based on the expected dividend yield and the fact that we have never paid or declared dividends. Significant changes to the fair value of the underlying stock would have resulted in a significant change in the fair value measurements.

In connection with this offering, the underlying convertible preferred stock will be converted to common stock, the preferred stock warrant will become exercisable for common stock instead of preferred stock and the fair value of the warrant liability at that time will be reclassified to additional paid-in capital, after which it will no longer be remeasured at fair value.

Emerging Growth Company Status

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and we may take advantage of reduced reporting requirements that are otherwise applicable to public companies. We may take advantage of these exemptions until we are no longer an emerging growth company. Section 107 of the JOBS Act provides that an emerging growth company can take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards. We have elected to use the extended transition period for complying with new or revised accounting standards; and as a result of this election, our financial statements may not be comparable to companies that comply with public company effective dates. We may take advantage of these exemptions up until the last day of the fiscal year following the fifth anniversary of this offering or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company if we have more than \$1.07 billion in annual revenue, we have more than \$700.0 million in market value of our stock held by non-affiliates (and we have been a public company for at least 12 months and have filed one annual report on Form 10-K), or we issue more than \$1.0 billion of non-convertible debt securities over a three-year period.

Recently Adopted Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board, or FASB, or other standard setting bodies and adopted by us as of the specified effective date. Unless otherwise discussed, we believe that the impact of recently issued standards that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

In November 2015, the FASB issued ASU 2015-17, *Balance Sheet Classification of Deferred Taxes*, or ASU 2015-17. The guidance requires that all deferred tax assets and liabilities, along with any related valuation allowance, be classified as noncurrent on the balance sheet. This guidance was effective in the first annual period ended after December 15, 2016, and interim periods thereafter, for public entities. For all entities other than public business entities, the guidance becomes effective for financial statements issued for annual periods beginning after December 15, 2017, and interim periods within annual periods beginning after December 15, 2018. Early adoption is permitted for all entities as of the beginning of an interim or annual reporting period. We adopted ASU 2015-17 as of January 1, 2016. The adoption of ASU 2015-17 had no material impact on our consolidated financial statements and related disclosures.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230), Restricted Cash*, or ASU 2016-18. The amendments of ASU 2016-18 were issued to address the diversity in classification and presentation of changes in restricted cash and restricted cash equivalents on the statement of cash flows which is currently not addressed under Topic 230. ASU 2016-18 would require an entity to include amounts generally described as restricted cash and restricted cash equivalents with cash and cash equivalents when reconciling the beginning of period and end of period total amounts on the statement of cash flows. This guidance is effective for annual reporting periods, and interim periods within those years, beginning after December 15, 2017, for both public entities and no later than for annual reporting periods beginning after December 15, 2018, for non-public entities. Early adoption is permitted and the standard must be applied retrospectively. We adopted this standard as of January 1, 2017 retrospectively for all periods presented.

In January 2017, the FASB issued ASU 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business*, or ASU 2017-01. This new standard clarifies the definition of a business and provides a screen to determine when an integrated set of assets and activities is not a business. The screen requires that when substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, the set is not a business. Early adoption was permitted. We adopted the requirements of ASU 2017-01 as of January 1, 2016 and applied the screen when evaluating the nature of the assets received in connection with the acquisition of Epiva in 2016. As a result of applying this screen we concluded that Epiva was not a business.

Accounting Pronouncements Issued and Not Adopted as of December 31, 2017

In May 2014, the FASB issued Accounting Standards Update ASU, 2014-09—Revenue from Contracts with Customers (Topic 606), or ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*, and further updated through ASU 2016-12, or ASU 2016-12, which amends the existing accounting standards for revenue recognition. ASU 2014-09 is based on principles that govern the recognition of revenue at an amount to which an entity expects to be entitled when products are transferred to customers. This guidance is effective for annual reporting periods, and interim periods within those years, beginning after December 15, 2017, for public entities and no later than for annual reporting periods beginning after December 15, 2018, for non-public entities. The new revenue standard may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of adoption. While we continue to assess all potential impacts under ASU 2014-09, we do not believe adopting the new revenue recognition standard will have a material impact on our consolidated financial statements as we are not yet generating revenue.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, or ASU 2016-02, which supersedes the guidance in ASC 840, Leases. 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. 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. This guidance is effective for annual reporting periods, and interim periods within those years, beginning after December 15, 2018 for public entities and no later than for annual reporting periods beginning after December 15, 2019, and interim period within fiscal years beginning after December 15, 2010 for non-public entities. ASU 2016-02 is expected to impact our consolidated financial statements as we have certain operating lease arrangements for which we are the lessee. We are currently evaluating the impact the adoption of ASU 2016-02 will have on our consolidated financial statements and related disclosures.

In March 2016, the FASB issued ASU 2016-09, *Improvements to Employee Share-based Payment Accounting*, or ASU 2016-09. ASU 2016-09 simplifies several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. Some of the areas of simplification apply only to non-public companies. This guidance was effective on December 31, 2016 for public entities. For entities other than public business entities, the amendments are effective for annual periods beginning after December 15, 2017, and interim periods within annual periods beginning after December 15, 2018. Early adoption is permitted for an entity in any interim or annual period for which financial statements have not been issued or made available for issuance. An entity that elects early adoption must adopt all amendments in the same period. We have not early adopted ASU 2016-09. We are currently evaluating the impact the adoption of ASU 2016-09 will have on our consolidated financial statements and related disclosures.

In May 2017, the FASB issued ASU 2017-09, *Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting*, or 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. This guidance is effective for annual reporting periods, and interim periods within those years, beginning after December 15, 2017, for both public entities and non-public entities. Early adoption is permitted. We are currently evaluating the impact of adopting this standard on our consolidated financial statements and related disclosures but do not expect it to have a significant impact.

Quantitative and Qualitative Disclosure about Market Risk

Interest Rate Fluctuation Risk

We are exposed to market risk related to changes in interest rates. As of December 31, 2017, our cash and cash equivalents consisted of cash and money market accounts. Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. However, because of the short-term nature of the instruments in our portfolio, an immediate 10% change in market interest rates would not have a material impact on the fair market value of our investment portfolio or on our financial position or results of operations.

As of December 31, 2017, we had \$10.0 million of borrowings outstanding under term loans pursuant to our loan and security agreement with Pacific Western Bank. These term loans bear interest at a variable annual rate equal to the greater of (a) 0.25% above the Prime Rate or (b) 3.75%, thereby exposing us to interest rate risk. In February 2018, we drew an additional \$5.0 million available under the loan and security agreement. This resulted in an increase to the interest rate to the higher of (i) prime plus 0.25% or (ii) 4.50% per annum. Based on the \$10.0 million of principal outstanding as of December 31, 2017, an immediate 10% change in the Prime Rate would not have a material impact on our debt-related obligations, financial position or results of operation.

Foreign Currency Fluctuation Risk

We are not currently exposed to significant market risk related to changes in foreign currency exchange rates; however, we have contracted with and may continue to contract with foreign vendors that are located in Europe. Our operations may be subject to fluctuations in foreign currency exchange rates in the future.

Inflation Fluctuation Risk

Inflation generally affects us by increasing our cost of labor and clinical trial costs. We do not believe that inflation had a material effect on our business, financial condition or results of operations during the years ended December 31, 2017 and 2016.

BUSINESS

Overview

Evelo Biosciences is pioneering the development of therapies designed to act on the gut-body network. The action of our therapies is based on our growing understanding of the central role of the gut in controlling immune and biological activity throughout the body. The gut-body network represents the connections of the gut to all organs and tissues, which enables the gut to exert a significant level of control over the body's immune and biological systems. The centrality of the gut-body network to the immune system has only recently become appreciated, and modern medicine and drug discovery have largely overlooked the importance of the gut-body network in fighting disease. We believe that we have the potential to use the unexplored biology of the gut-body network to develop a new class of therapies that could transform the treatment of many major diseases, potentially driving profound benefits to patients and society.

The gut, or the gastrointestinal tract, is the largest part of the immune system and is a central hub of the body's network of lymphatic vessels. Immune cells from around the body circulate via these lymphatic vessels through tissues of the gut, where they are conditioned by exposure to the many antigens and immunomodulatory agents that continuously pass through the gut. These conditioned immune cells then continue to travel throughout the body and can impact disease and health at all sites of the body. Microbes, in particular, have the ability to condition immune cells in the gut.

We are developing orally-delivered pharmaceutical compositions of specific strains of naturally-occurring microbes derived from a single clone which we refer to as monoclonal microbials. Our monoclonal microbials are designed to act on the gut-body network. We and our collaborators have observed in preclinical studies that specific monoclonal microbials can downregulate or upregulate immune responses throughout the body by acting on the gut-body network with naturally-evolved pharmacology. We believe that monoclonal microbials exert their effects through interactions with host immune cells as they pass through the gut. We have observed in preclinical animal models that our monoclonal microbials neither circulate throughout the body nor colonize the gut. These properties of monoclonal microbials could present significant potential advantages over existing therapies, including safety, efficacy and convenience.

We have built a proprietary platform designed to develop monoclonal microbials as therapeutics. Our platform integrates tools and capabilities necessary to source, select, develop and manufacture monoclonal microbials as therapies. The efficiency of our platform has, in a relatively short period of time, allowed us to produce three product candidates for a range of inflammatory diseases and cancer that we plan to advance into clinical trials in

We believe that monoclonal microbials have the potential to address significant patient need at various stages of disease. We believe this is due to their potentially superior characteristics over current therapies and the advantages of our platform, specifically:

- We have observed activity in animal models for each of our lead development programs. Each of our monoclonal microbials acts through multiple naturally-evolved biological pathways. By acting on multiple pathways simultaneously, we believe monoclonal microbials can impact disease in ways that are not addressable with current single-target therapies.
- We believe our monoclonal microbials are likely to be well tolerated given that they are single strains of naturally-evolved human commensal microbes that act on the gut-body network without significant risk of systemic exposure. Monoclonal microbials have the potential to be used at earlier stages of disease and, by extension, in many more patients than current immunomodulatory drugs due to their potential tolerability advantages.
- Our development of monoclonal microbials has the potential to be more efficient than those of other therapeutic classes such as cell therapy, monoclonal antibodies and small molecules. We believe that monoclonal microbials do not require the lengthy target validation and compound discovery

requirements of conventional drug discovery. Additionally, we believe the manufacture of monoclonal microbes is meaningfully faster than that of certain other biologics and can further accelerate our path to clinical testing and commercialization.

Our product development strategy is to evaluate a range of monoclonal microbes with different activities in clinical trials across multiple diseases. The initial trials for our product candidates are expected to provide information on safety and biomarkers of immune response at and beyond the site of disease. We believe this biomarker data will enable expansion into a broad range of clinical indications. We expect to initiate clinical trials for our first two monoclonal microbial candidates, EDP1066 and EDP1815, in inflammatory diseases in and , respectively, with initial biomarker and clinical data expected in and , respectively. We are also developing two monoclonal microbial therapies in oncology. The first is EDP1503, for which we expect to initiate a clinical trial in , to obtain initial biomarker data in and to obtain initial efficacy data in . We expect to select our second oncology product candidate from several other monoclonal microbes in our discovery program.

Our initial clinical product candidates and additional potential future areas of therapeutic focus are illustrated below.

		Expected first- in-human trials	Initial clinical data
Inflammatory Diseases	Psoriasis	EDP1066	, 20
		EDP1815	, 20
	Atopic Dermatitis	EDP1066	, 20
		EDP1815	, 20
	Rheumatoid Arthritis	Candidate selection	, 20
	Ulcerative Colitis / Crohn's Disease	Candidate selection	, 20
Oncology	Melanoma	EDP1503	, 20
	Colorectal Cancer	Candidate selection	, 20
	Renal Cell Carcinoma	Candidate selection	, 20
Therapeutic Areas w/ Preclinical Data	Neuro-inflammation/degeneration (e.g. multiple sclerosis) Liver diseases (e.g. non-alcoholic steatohepatitis) Type I diabetes		
Additional Therapeutic Areas	Food allergy Respiratory diseases (e.g. asthma) Metabolism (e.g. obesity, type II diabetes) Neurobehavior (e.g. autism, depression)		

Beyond our first set of clinical product candidates, we have identified several other potential candidates from our discovery program, and we are continuing to invest in the discovery of additional potential candidates. We believe monoclonal microbes and our platform have broad potential utility beyond our initial therapeutic focus areas of inflammatory diseases and oncology, and we plan to pursue many opportunities in which our platform has the potential to transform medicine.

Our Strategy

Our goal is to create and develop a new class of therapies that have the potential to transform the treatment of a broad range of diseases by focusing on the gut-body network. We believe we are the pioneers in exploring therapeutic applications of this biology.

Key elements of our strategy to achieve this goal are to:

- **Realize the full potential of the gut-body network to create an expansive and diversified product portfolio.** We believe the gut-body network has applicability across a range of disease areas and we are committed to pursuing the many opportunities in which our platform has the potential to transform medicine. Our initial focus is on inflammatory diseases and oncology, and we intend to expand into other disease areas, such as those affecting the central nervous system, or CNS, autoimmune disease, metabolic disorders, respiratory disease and cardiovascular disease.
- **Develop best-in-class therapies to improve outcomes across various stages of disease.** We intend to develop best-in-class orally-delivered therapies and intend to explore the potential of monoclonal microbes across various stages of disease, not only in patients with severe or advanced disease. We intend to pursue what we believe to be the inherent advantages of monoclonal microbes to enable use in earlier stages of disease and to develop and provide treatments for a wide range of patients in multiple geographies.
- **Generate early clinical readouts with biomarker driven validation to efficiently advance our product candidates.** We have prioritized indications with ease of accessibility to biopsies for biomarker analysis. We intend to use these biomarkers to clinically validate the immunological activity and dose of our monoclonal microbes and to guide subsequent clinical expansion and patient selection.
- **Industrialize monoclonal microbes and capitalize on our first mover advantage.** We plan to continue to invest in our platform, which integrates microbiology, immunology and computational biology capabilities. We intend to expand the diversity of our monoclonal microbial library and enhance our proprietary *in vitro* and *in vivo* models to optimize selection of our future product candidates. Our manufacturing processes are designed to ensure the quality and scalability of our products. We plan to continue to invest in novel methods for process development, manufacturing and formulation for our monoclonal microbes. Future plans include investment in commercial scale manufacturing. We plan to leverage the efficiency of our integrated capabilities to accelerate the clinical development of many product candidates.
- **Strengthen and expand our intellectual property to protect our platform.** We have exclusive rights to our technologies including issued composition of matter and method of use patents in the United States for our product candidates. We intend to diligently pursue patent protection for our scientific innovations and to maintain a strong and broad estate of patents and trade secrets in the United States and other geographies.
- **Collaborate to realize the potential of the gut-body network and monoclonal microbes.** We intend to continue to seek collaborations with academic groups, biotech and pharmaceutical companies to realize the value of our broad platform and extend the range of our development activities and disease areas in a timely and cost effective manner. We plan to commercialize products in multiple geographies both on our own and with collaborators.

Evelo and Flagship Pioneering

Evelo was founded by Flagship Pioneering in 2014 to commercialize insights, inventions and innovations developed by the VentureLabs founding team across two primary explorations. A first exploration focused on the interface between microbes and cancers. The VentureLabs founding team identified means by which various microbes could be added to drive anti-cancer effects. A second exploration focused on the interface between the microbes in the gut and the immune system. The VentureLabs founding team identified unique mechanisms by which microbes shape and interact with the immune system. The exploration identified specific mechanisms by which microbes could induce tolerance, immune class shifting, cytokine production and beyond, identifying opportunities across autoimmune disease, allergy, etc. These insights led to the launch of Evelo in 2014, which was

founded with a VentureLabs-developed patent estate directed at microbes that potentially could be administered to treat cancer and inflammatory diseases through immune, metabolic and other mechanisms. Flagship Pioneering provided initial and ongoing capital needed to form, launch and grow Evelo so that the company could seek to unlock the potential for single, orally administered microbes to drive immune-associated biology through the gut.

The Immune System and the Use of Immunotherapy in Disease

Immunology and Current Immunotherapy

The immune system consists of many different cell types that act together as a coordinated system to constantly scan for, identify and respond to both human and microbial signals. Immune cells, including different types of T-cells, circulate throughout the body via the lymphatic system searching for signs of disease or infection. When this immune surveillance is functioning correctly, immune cells recognize and destroy both pathogens and cancer cells. However, when the immune system responds excessively, diseases such as psoriasis, rheumatoid arthritis, asthma, inflammatory bowel disease and multiple sclerosis can result. Conversely, an inadequate immune system response may allow various types of cancer to progress unchecked.

Advances in our understanding of how the immune system affects a broad spectrum of disease has resulted in the development of immunotherapies, which are medicines that reduce, suppress, elicit or amplify specific immune responses. Antibody-based immunotherapies for inflammatory diseases and oncology have fundamentally changed the treatment landscape for patients. For example, anti-TNF α antibodies are widely used to treat moderate to severe stages of many inflammatory diseases. In 2017, three of the five top selling drugs worldwide were anti-TNF α antibodies, with HUMIRA alone generating worldwide annual net sales of \$18.4 billion. In oncology, checkpoint inhibitor antibodies, including those targeting the programmed cell death protein/ligand 1, or PD-1/PD-L1 pathways, block the tumor's ability to suppress the immune response. They have significantly improved the treatment of many cancers and are expected as a class to reach peak annual net sales of \$30 billion by 2025. While existing immunotherapies have been successful in treating inflammatory diseases and oncology, there remains a significant unmet need for a majority of patients.

Emergence of a New Paradigm in Immunotherapy

Until recently, immunotherapeutic approaches have largely ignored one of the body's naturally-evolved routine immunological processes and its associated immune organ—the gut. Immunomodulation through the gut has the potential to address certain limitations of current immunotherapies by acting on multiple naturally-evolved pathways. We believe this novel approach presents significant advantages, including potentially minimizing adverse events, enhancing patient convenience and targeting multiple immune pathways simultaneously. We believe that a novel class of therapeutics with these attributes has the potential to be transformative in treating a broad range of immune-mediated diseases. Furthermore, we believe this approach could also expand the use of immunotherapies for the treatment of patients with earlier stages of disease.

The Gut-Body Network is Central to Human Biology and Immunology

The gut is the largest part of the immune system. The gut is networked to almost all parts of the body by the lymphatic and nervous systems. As part of this connected network, which we call the gut-body network, the body's immune cells regularly traffic through the gut. The natural biology of the gut acts as an important regulator of the human immune system. Specific types of immune cells, including antigen-presenting cells such as dendritic cells and macrophages, traffic through lymphoid tissues of the gut, where they sample specific contents in the interior of the gut, which is called the lumen. These antigen-presenting cells then circulate to lymph nodes where they condition important immune cells, including T-cells. These conditioned T-cells then travel throughout the body via the lymphatic system to impact disease. We believe the gut-body network provides an opportunity for gut-mediated immunomodulation throughout the body after oral delivery of products that remain physically restricted to the lymphoid tissues of the gut and lumen. As such, immunomodulation on the gut-body network may represent an underappreciated opportunity to educate T-cells to drive therapeutically relevant immune responses throughout the body.

The Gut-Body Network and Microbes

Microbes are single-cell organisms that have co-evolved with humans and their immune systems for millennia. Many human immune cells are programmed to sense and respond to microbes that they contact in the gut. Research in mucosal immunology has revealed that microbial interactions in the gut can drive activity on the gut-body network.

Multiple mechanisms for direct interactions between microbes and immune cells in the gut have been demonstrated. We believe that dendritic cells and macrophages in the lymphoid tissues of the gut are key target cells of immunomodulatory microbes. Dendritic cells are a specialized type of immune cell that survey the body's tissues and present antigens to T-cells. Macrophages can take on many functional forms depending on the conditioning of their environment in the body, and are important for both anti-inflammatory and anti-tumor immunity. Antigen-presenting cells, such as dendritic cells and macrophages, can extend protrusions through junctions between epithelial cells of the gut lining. These protrusions come into direct contact with and sample the microbial contents of the gut lumen. These antigen-presenting cells then drain to mesenteric lymph nodes where they come into contact with T-cells. Dendritic cells and macrophages that have been primed by exposure to microbes in the gut condition T-cells and push them towards inflammatory or immunoregulatory activities depending on the specific strain of the original microbe. T-cells continue to move through the body via the lymphatic system to other parts of the body where they may act in local tissue to modulate an immune response.

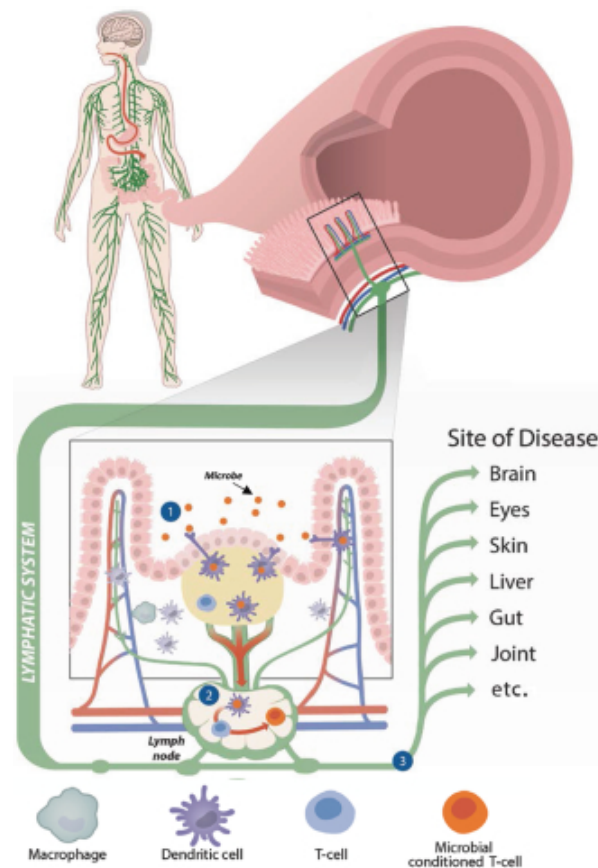


Figure 1: The gut-body network and microbes. The gut-body network is pictured in the upper portion of the figure. The gut is connected to many other parts of the body via the lymphatic system in green. The cross-section of the small intestine depicts 1) sampling of microbes in the gut by dendritic cells and macrophages, 2) conditioning of T-cells by dendritic cells and macrophages in the lymph node, and 3) migration of conditioned T-cells to other areas of the body.

Several of our academic collaborators have explored the functional consequences of the interactions between immune cells and single strains of microbes in the gut. Veena Taneja, Ph.D. and Joseph Murray M.D. of Mayo Clinic showed that an orally-administered strain of *Prevotella histicola* modulated immune function in mouse models of rheumatoid arthritis and multiple sclerosis. In the field of immuno-oncology, Thomas Gajewski, M.D., Ph.D. and his group at the University of Chicago conducted an experiment in which a single strain of orally-administered *Bifidobacterium* had equivalent activity to an anti-PD-L1 antibody and additive activity in combination in a mouse model of melanoma. We believe these and other examples from the academic literature support our theory that single strains of microbes act on the gut-body network to suppress or activate immune responses throughout the body.

Monoclonal Microbials as a Potential New Class of Therapies

We were formed to pioneer therapies that act on the gut-body network. We aim to develop therapies based on our recent understanding of the central role of the gut in modulating immune activity throughout the body and the equally important role of microbes as key modulators of the gut-body network.

We believe that now is an opportune time to translate observations from the naturally-evolved gut-body network into immunotherapies to treat many diseases. While microbes have evolved with humans for millennia, until recently, the scientific community lacked the necessary tools to deconstruct and analyze the complex interactions between microbes, the immune system, and the gut-body network. Advances in next-generation sequencing, immunology and computational analyses of large microbial datasets have led to a better understanding of the microbes that live on and inside humans and have provided critical insights into their specific functions and mechanisms. In turn, these insights have allowed us to develop the tools necessary to isolate, select, and develop specific microbes that have historically been difficult to culture. This extends from the initial stages of microbial isolation to the final stages of monoclonal microbial manufacturing. We have developed proprietary insights and tools that enhance our ability to produce pharmaceutical compositions of monoclonal microbials at scale. This allows us to deliver potentially therapeutic doses of our appropriately formulated select strain.

We are developing monoclonal microbials to act on the gut-body network to either downregulate or upregulate immune responses for the treatment of disease. Monoclonal microbials are single strains of naturally-occurring microbes. Our product candidates are pharmaceutical compositions of specific monoclonal microbials that we believe can interact with and modulate the human immune system.

We believe key features and advantages of our monoclonal microbial product candidates are:

- **Single strain.** Our product candidates are pharmaceutical compositions of single strain monoclonal microbials that we have selected for their specific pharmacology. Our preclinical data suggests that various strains of microbes within the same genus or species can have vastly different immunomodulatory properties. We extensively characterize the ability of our product candidates to elicit a desired immunomodulatory effect. We also believe single strain microbes have manufacturing advantages over biologics and consortia of microbes.
- **Orally-administered formulation.** We intend to deliver our initial product candidates to patients at pharmacological doses as dry, white powder inside capsules coated for targeted release in the gut. Patients typically prefer oral administration to intravenous infusion and subcutaneous injection, which we believe will facilitate the adoption of our product candidates, if approved.
- **Limited systemic exposure.** In preclinical studies, we observed that monoclonal microbials had limited systemic exposure, that they cleared from the gut within 24 to 48 hours and that colonization was not required for beneficial activity. We believe that these factors will contribute to more favorable safety and tolerability profiles for our product candidates compared to current immunotherapies.
- **Multiple naturally-evolved pathways.** Our preclinical data has shown that monoclonal microbials may act simultaneously on multiple naturally-evolved biological pathways. The diseases we intend to treat

are multifactorial, and we believe that our potential therapies will be advantageous over single-target treatments.

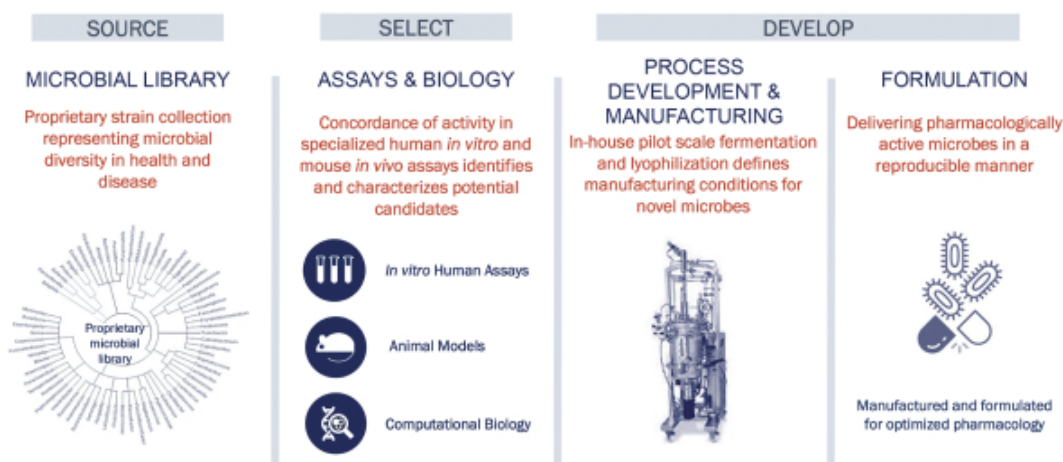
- **Manufacturing capabilities.** Although manufacturing of monoclonal microbials is complex, we believe that we have developed capabilities that will accelerate the process from strain identification to clinical supply and may give us a competitive advantage. Unlike the lengthy timelines associated with current Good Manufacturing Practices, or cGMP, manufacturing of antibodies, we have been able to manufacture monoclonal microbials in a shorter timeframe, which we believe may accelerate our speed into the clinic. Additionally, we believe that we may be able to cost effectively manufacture monoclonal microbials.

Given these expected features, we believe that monoclonal microbial therapies may have a number of advantages in comparison to other immunotherapies such as antibodies, cell therapies and small molecules.

Our Monoclonal Microbial Platform

We have developed an integrated platform designed to identify individual strains of microbes capable of modulating the immune system by acting on the gut-body network when administered at pharmacologically active doses. We use the process development and formulation capabilities of our platform to turn selected microbes into clinical product candidates.

Our proprietary monoclonal microbial platform is comprised of the following four key areas:



Monoclonal microbial library. We have developed a proprietary library of diverse strains of microbes. Microbes in our library are isolated from natural sources, including samples from healthy and diseased humans, in order to benefit from the co-evolution of microbes and the human immune system. To increase our probability of finding microbes with potent immunomodulatory activity, we sample from body sites where microbes interact with the immune system, such as gut tissues. We also have bolstered and continue to add to our library through selective licensing agreements and collaborations with academic partners.

Assays and biology. The proprietary tools within our platform are designed to efficiently identify and extensively characterize our monoclonal microbials through a series of *in vitro*, *in vivo* and *ex vivo* assays. We have constructed our proprietary *in vitro* assays to simulate the complex interactions between microbes and the human immune system, allowing us to evaluate the immunological activity of each microbe in a relevant experimental system. Our *in vitro* assays are capable of screening hundreds of microbes in parallel and producing

more than 150 data points per strain, including levels of pro-inflammatory and anti-inflammatory cytokines and chemokines. This assists our comprehensive selection process to identify select candidates for testing in disease-relevant animal models. By conducting our *in vitro* assays in both mouse and human immune cells, we add to our mechanistic understanding. We believe this increases the probability of translation of preclinical *in vivo* results to efficacy in the clinic.

Process development and manufacturing. Process development and manufacturing are critical for the translation of monoclonal microbials into therapies. Our expertise and investments in pilot scale manufacturing have allowed us to surmount challenges inherent to monoclonal microbial manufacturing at clinical scale. Major challenges include: limited understanding and characterization of novel microbes; strict anaerobic growth conditions required by several microbes, many of which have never before been fermented; and temperature and oxygen sensitivities that affect downstream processing. We believe that our approach to these challenges may enable us to accelerate the process from strain identification to clinical supply.

Process development is integrated into our research activities, combining discovery and downstream development. We have achieved significant control of quality, identity, purity, and potency throughout the process of strain selection, fermentation, formulation, and pharmacology, with high yield. Importantly, our manufacturing processes enable us to produce a drug substance that is pharmacologically active in the form of a lyophilized powder, which is suitable for cGMP production. For each of our three initial product candidates, we have observed therapeutic activity in lyophilized powder form in relevant preclinical mouse models.

Formulation. We plan to formulate our first clinical product candidates as capsules containing lyophilized powder, with targeted release in the gut. We aim to provide patients with optimally formulated oral therapies that are safe, effective and convenient. We continuously invest in formulation to evaluate optimal delivery of our product candidates and enhance their ability to act on the gut-body network.

Product Development Strategy and Portfolio

We are advancing monoclonal microbials to potentially treat a spectrum of immune-mediated diseases with an initial focus on inflammatory diseases and oncology. We expect our initial clinical trials for our product candidates to provide information on safety and biomarkers of immune response in multiple indications with different pathologies and sites of disease. This may allow for expansion into a broad range of clinical indications, which could enable us to capture the breadth of clinical value.

Beyond our first wave of clinical product candidates in inflammatory diseases and oncology, we are continuing to invest in the discovery of new candidates to build a deep pipeline across a wide range of diseases and tissue types to leverage the broad potential of our platform. We also intend to opportunistically collaborate to expand indications and accelerate development of programs where collaborators can contribute further disease-specific expertise to our platform.

Our initial clinical product candidates and additional potential future areas of therapeutic focus are illustrated below.

		Expected first-in-human trials	Initial clinical data
Inflammatory Diseases	Psoriasis	EDP1066	, 20
		EDP1815	, 20
	Atopic Dermatitis	EDP1066	, 20
		EDP1815	, 20
	Rheumatoid Arthritis	Candidate selection	, 20
	Ulcerative Colitis / Crohn's Disease	Candidate selection	, 20
Oncology	Melanoma	EDP1503	, 20
	Colorectal Cancer	Candidate selection	, 20
	Renal Cell Carcinoma	Candidate selection	, 20
Therapeutic Areas w/ Preclinical Data	Neuro-inflammation/degeneration (e.g. multiple sclerosis) Liver diseases (e.g. non-alcoholic steatohepatitis) Type I diabetes		
Additional Therapeutic Areas	Food allergy Respiratory diseases (e.g. asthma) Metabolism (e.g. obesity, type II diabetes) Neurobehavior (e.g. autism, depression)		

Inflammatory Diseases Portfolio

We are advancing two monoclonal antibodies, EDP1066 and EDP1815, into the clinic for treatment of inflammatory diseases. We expect to initiate clinical trials for both product candidates in . Several other potential product candidates have been identified in our discovery program.

Our first-in-human studies for EDP1066 and EDP1815 will evaluate dose and biomarker signals relative to placebo in healthy volunteers, as well as in patients with psoriasis and atopic dermatitis. EDP1066-001 is a dose-escalating safety and tolerability clinical study of EDP1066 in 36 healthy volunteers and in 60 patients with psoriasis or atopic dermatitis. It will test a range of daily doses in healthy volunteers over 14 days and in patients over 28 days. We will evaluate safety as a primary endpoint, as well as a variety of pharmacodynamic markers, including biomarker signals from paired biopsies of affected skin in patients, as secondary endpoints. We expect to dose the first subject in . We expect that study results will be available in and will include safety and tolerability, as well as biomarker and clinical efficacy observations in patients. We intend to initiate a similar safety and tolerability study for EDP1815 in . Based on feedback from the MHRA, the United Kingdom regulatory authority, and our strong relationships with principal investigators who we would expect to be able to enroll healthy volunteers as well as psoriasis and atopic dermatitis patients under a single study, we intend to conduct both of these studies in the United Kingdom. We intend to initiate future additional trials in the United States and other countries.

We selected mild-to-moderate psoriasis and atopic dermatitis as indications for first-in-human studies primarily based upon need in large patient populations, the ease of access to patient tissue for biomarker analysis and the speed of clinical data readout. Patients with mild-to-moderate disease represent between 80% and 90% of the patient population, which in the United States represents more than 25 million people. We believe these

patients are underserved by current treatments, including steroids, which either inadequately control inflammation or are not safe for long-term use. The majority of novel therapies, including next generation biologics targeting IL-17 and IL-23, are only approved for patients with moderate-to-severe disease. A large proportion of these eligible patients do not receive biologics, instead opting for topicals or oral systemic therapies. These factors suggest a need for a novel therapeutic option that is safe, effective and convenient.

We believe the potential safety and tolerability profiles of our monoclonal microbial product candidates will be better suited to treat patients at an earlier stages of inflammatory diseases than current therapies in addition to pediatric patients. Particularly in atopic dermatitis, many patients are infants or young children who have fewer therapy options than adult patients. If our product candidates demonstrate safety and tolerability features in clinical trials, they could open up a larger market than the one currently treated by biologics. If proof-of-concept in mild-to-moderate patients is established, we also intend to broaden our studies to treat patients with moderate-to-severe inflammation, potentially expanding this market opportunity further.

If we successfully demonstrate the safety of EDP1066 and EDP1815 at planned therapeutic doses in first-in-human studies, we plan to initiate additional studies in rheumatoid arthritis and inflammatory bowel disease, or IBD. These initial four indications are driven by differentiated combinations of Th1, Th2 and Th17 biologics. The results from these trials are intended to guide clinical expansion to additional indications with related biology. For example, early proof-of-concept in atopic dermatitis could support expansion to other atopies and Th2-driven diseases, including asthma and food allergy.

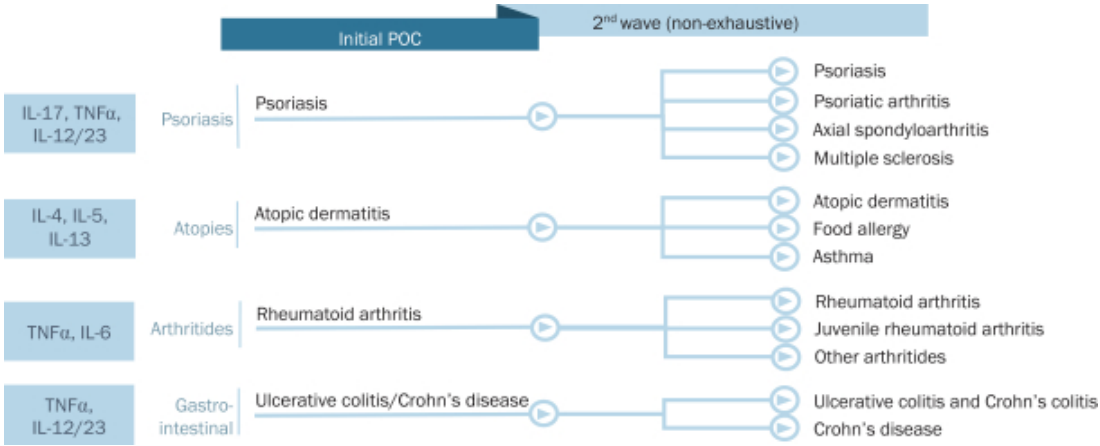


Figure 2: Biomarker data from initial clinical studies in inflammatory diseases may allow for rational expansion to mechanistically similar inflammatory diseases. Cytokines associated with disease clusters are shown at the left of the figure.

In preclinical mouse models, our inflammatory disease product candidates reduced systemic inflammation with equal or better activity than current standard of care therapies. We believe that this observation may translate to broad activity across a variety of inflammatory diseases. We have produced preclinical data in distinct mouse models that are representative of different biologics, suggesting that single monoclonal microbials may impact multiple immune pathways.

T-cells of the Th1 or Th17 type are implicated in psoriasis, joint inflammatory diseases and neuroinflammation, while T-cells of the Th2 type are more important for atopies and allergic diseases. With current cytokine-directed therapies, agents are targeted towards a specific cytokine to influence one or more of these pathways. For instance, Th1-driven inflammation can be controlled by TNF α inhibition, Th17-driven inflammation can be controlled by IL-17 inhibition, and Th-2 driven inflammation can be controlled by IL-4 or IL-13 inhibition.

Each of our monoclonal microbial candidates have demonstrated the ability to simultaneously impact multiple of these pathways and associated cytokines in preclinical assays, suggesting that they may have broader applicability than individual cytokine-directed therapies. Separately, there are additional anti-inflammatory cytokines such as IL-10 and IL-27 that can inhibit the production of certain pro-inflammatory cytokines. Certain of our product candidates enabled increased production of IL-10 and IL-27 in preclinical assays.

EDP1066

EDP1066 is a monoclonal microbial product candidate being developed to treat inflammatory diseases. We selected EDP1066 for its *in vitro* profile in human immune cell assays combined with its efficacy in a range of mouse inflammation models. In preclinical studies, orally-administered EDP1066 acted on the gut-body network to modulate systemic immune responses in multiple mechanistically and anatomically varied *in vivo* models, including the Th1-mediated delayed type hypersensitivity, or DTH, model, which measures skin inflammation after antigen challenge, the Th2-mediated 2,4-dinitrofluorobenzene, or DNFB, skin inflammation model, and the dextran-sodium sulfate, or DSS, model of immune-cell mediated gut inflammation.

In Vitro Assays

Our *in vitro* assays measure the effects of individual strains of bacteria on human immune cells and test several dozen immunomodulatory characteristics. A representative example of a human *in vitro* assay data for EDP1066 is shown in Figure 3. Plotted to show IL-10 and IL-27 cytokines produced, each circle on the plot represents a different individual strain from our microbial library. The size of each circle represents the magnitude of pro-inflammatory chemokine CXCL10. Each strain was co-cultured with human macrophages, an immune cell type that is abundant in the gut and is a known controller of inflammation. In the assay, EDP1066 was a high inducer of anti-inflammatory cytokines, IL-10 and IL-27. Conversely, EDP1066 did not significantly induce CXCL10, a pro-inflammatory mediator, in the assay. We believe these characteristics could be suitable for an anti-inflammatory agent.

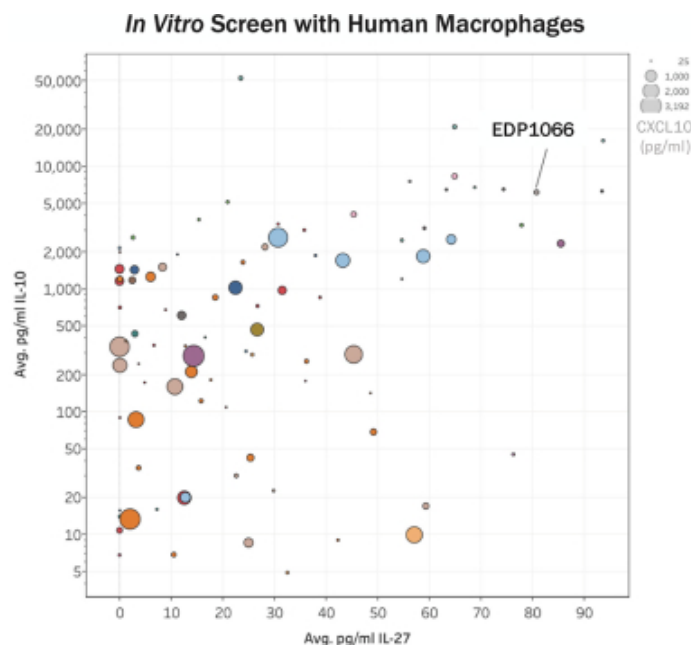


Figure 3: Production of cytokines by human macrophages after co-culture with monoclonal microbials. Macrophages purified from human peripheral blood mononuclear cells were co-cultured with 95 individual monoclonal microbials (each represented by a circle). Cytokines produced by macrophages were measured. EDP1066 induced higher levels of IL-10 and IL-27, relative to other monoclonal microbials screened. EDP1066 also induced relatively lower levels of pro-inflammatory chemokine, CXCL10 (represented by the size of the circle).

Preclinical DTH Mouse Models

DTH in a mouse is a well-established model of Th1-driven inflammation resulting from pro-inflammatory antigen-specific T-cells. In the mouse model depicted in Figure 4, daily oral administration of EDP1066 reduced skin inflammation in response to antigen challenge. In the model, immunomodulation by EDP1066 on the gut-body network was as active as a therapeutic dose of the steroid, dexamethasone. The DTH model also suggests that individual monoclonal microbes may exert differentiated effects on the immune system. For example, a control monoclonal microbial, from the same species as EDP1066 did not reduce inflammation. In the model, orally-delivered and gut-restricted EDP1066 was able to induce certain systemic effects in a mouse as depicted below. We believe this data supports our development of EDP1066 in human diseases with Th1-driven systemic inflammation, starting with psoriasis and arthritides.

P-value is a conventional statistical method for measuring the statistical significance of clinical results. A p-value of less than 0.05 is generally considered to represent statistical significance, meaning that there is a less than five percent likelihood that the observed results occurred by chance. In the figure below and all subsequent figures where p-values are included, a p-value of less than 0.05 is represented by “*”. P-values of less than 0.01 or less than 0.001 are represented by “**” or “***” respectively and are considered to have higher statistical significance. Unless otherwise specified, the p-values shown represent a comparison of each treatment group to the vehicle or control group.

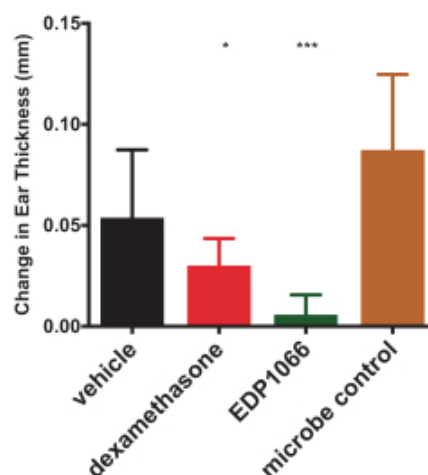


Figure 4: EDP1066 reduced skin inflammation in a DTH mouse model. Mice were sensitized with a foreign antigen, chicken ovalbumin, and Complete Freund's Adjuvant subcutaneously at day zero. Mice were orally-dosed for 10 days from sensitization on day zero with either vehicle, dexamethasone (1 mg/kg), EDP1066, or a microbe control. Eight days after sensitization, mice were given an intradermal ear challenge with ovalbumin. Change in ear thickness, a measure of skin inflammation, was evaluated 48 hours post-challenge. Treatment with EDP1066 resulted in greater reduction in inflammation relative to all other groups. (Significance relative to vehicle: *** = $p < 0.001$, * = $p < 0.05$, ns = not significant)

In a separate preclinical DTH study, we dosed mice with EDP1066 across a range of doses. In this experiment, the activity of EDP1066 was dose-dependent within a 100-fold dose range. Ascending doses varied by a factor of 10. At the two higher doses, change in ear thickness, a measure of skin inflammation, was comparable to treatment with dexamethasone. Because therapeutic efficacy is not further increased between these two higher doses, we believe that we are at a dose plateau indicative of maximum therapeutic activity in mice. We have used this information to determine the dosing range for our first-in-human clinical study.

Preclinical DNFB Mouse Model

We assessed the therapeutic activity of EDP1066 in an *in vivo* mouse model using DNFB skin challenge, as shown in Figure 5. DNFB causes a chronic T-cell and cytokine-dependent skin inflammation resembling atopic dermatitis in human patients. This model is dependent on the Th2 class of T-cells, which is associated with atopic and allergic conditions. In the study, we compared daily oral administration of EDP1066 to daily topical administration of clobetasol, a highly potent steroid cream applied to the skin in patients with atopic dermatitis and psoriasis. In the model, we observed no inflammation in the EDP1066 group eight days after the DNFB challenge, whereas there was not a significant difference between clobetasol and the control. At day 15, inflammation scores for clobetasol and EDP1066 were similar. We believe this activity supports our plan to target Th2-mediated diseases with initial clinical testing in atopic dermatitis.

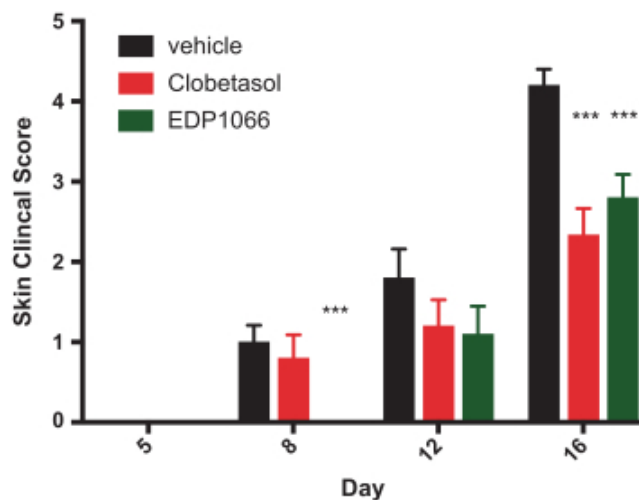


Figure 5: EDP1066 reduced skin inflammation in a mouse model of atopic dermatitis. Mice were sensitized with DNFB, a cutaneous contact sensitizer, at day zero. Mice were treated with oral vehicle, oral EDP1066, or topical clobetasol (0.05%) daily. Skin clinical score, which measures the severity of skin lesions, was assessed at multiple timepoints. EDP1066 delayed progression of inflammation compared to clobetasol at early time points and was comparable to clobetasol at later timepoints. (Significance relative to vehicle: *** = $p < 0.001$)

Preclinical DSS Mouse Model

We also tested EDP1066 in a mouse model of gut inflammation. Dextran sodium sulfate, or DSS, was administered in the drinking water of mice, resulting in immune-mediated gut inflammation and significant weight loss. Anti-IL-12/23 antibodies are often used as a positive control in this model. Daily oral administration of EDP1066 reduced weight loss and signs of inflammation in this model, as shown in Figure 6. Additionally, EDP1066 was more active than anti-IL-12/23, which is a mouse analog that acts on the same pathway as ustekinumab (STELARA), an approved therapy for inflammatory bowel disease. A closely related strain from the same species as EDP1066 was used as a microbe control and demonstrated no therapeutic benefit in this model. We believe the data observed in this model suggests the potential role of EDP1066 in controlling gut inflammation, which is important for IBD.

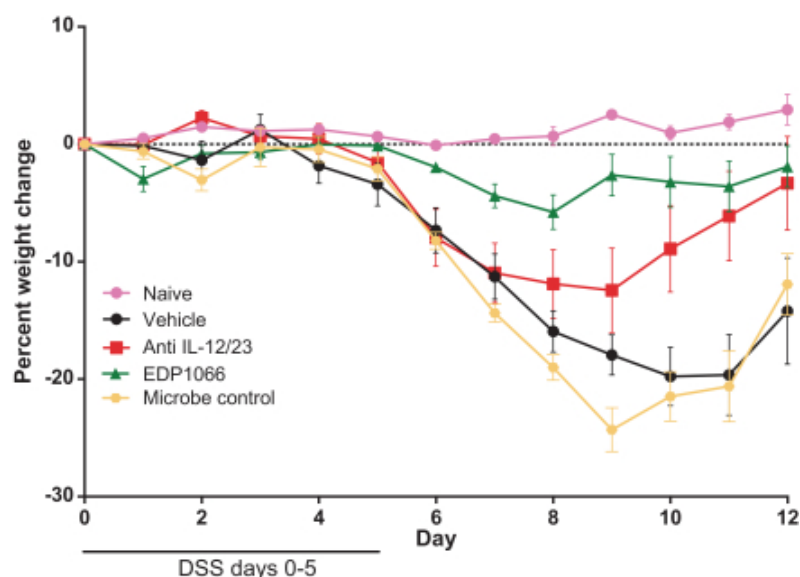


Figure 6: EDP1066 reduced weight loss in a mouse model of colitis. Dextran sodium sulfate (DSS) was administered to mice in drinking water from days 0-5. Mice were dosed daily with oral vehicle, oral EDP1066, oral microbe control, or anti-IL-12/23 (twice weekly intra-peritoneally). Mice treated with EDP1066 exhibited significantly less weight loss compared to mice in all other treatment groups

Planned First-in-Human Study

We plan to conduct the first-in-human clinical study EDP1066-001 in the United Kingdom, and we expect the first healthy volunteer to be dosed in . Clinical supply of EDP1066 GMP drug substance has been manufactured, and drug product is currently being manufactured. We met with the MHRA, United Kingdom medicines regulatory body, in a Scientific Advice meeting regarding EDP1066. We have been granted ethical approval for the proposed study through the central United Kingdom Research Ethics Committee, and submitted the application for Clinical Trial Authorisation in February 2018.

EDP1815

EDP1815 is our second monoclonal microbial product candidate that is being developed to treat inflammatory diseases. In preclinical testing, EDP1815 has exhibited a different set of biological activities than EDP1066. In preclinical studies, EDP1815 has shown immunomodulatory activity on human immune cells and anti-inflammatory activity in many discrete tissues, including skin, joints, gut and CNS after oral delivery in mouse models.

In Vitro Assays

Data from a representative example of a human *in vitro* assay for EDP1815 are shown in Figure 7. In the *in vitro* assay, human macrophages were pre-conditioned with lipopolysaccharide, or LPS, and interferon gamma, or IFN γ , for 24 hours to put them into a strongly pro-inflammatory state. These pre-conditioned human macrophages were then co-cultured with various microbes for another 24 hours to determine their effects on macrophage inflammatory activity. EDP1815 induced production of the anti-inflammatory cytokine IL-10.

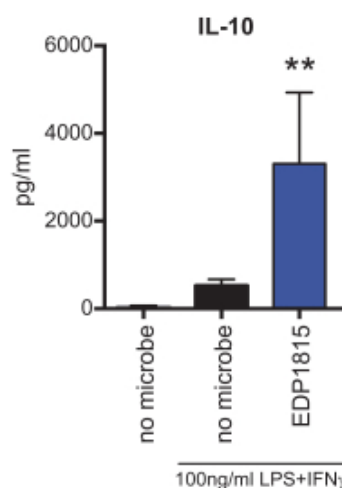


Figure 7: EDP1815 stimulated IL-10 production by human macrophages. Human macrophages were purified from peripheral blood mononuclear cells and pre-conditioned to a pro-inflammatory state with LPS and IFN γ . Pre-conditioned macrophages co-cultured with EDP1815 produced significantly higher levels of IL-10 compared to a pre-conditioned control alone (** = $p < 0.01$).

Preclinical DTH Mouse Model

We also tested EDP1815 in a DTH mouse model of Th1-driven skin inflammation relative to dexamethasone, a steroid, and fingolimod (GILENYA), a potent inhibitor of T-cell trafficking which is an approved therapy for multiple sclerosis. Results of the study, represented in Figure 8, show that suppression of inflammation by EDP1815 was comparable to dexamethasone and fingolimod. The dose of fingolimod used in this study was higher than the equivalent dose level in humans that would be used for treatment. Moreover, doses of EDP1815 within a 10-fold range were comparable to fingolimod. Because higher doses of EDP1815 did not further increase therapeutic effect, we believe we achieved a dose plateau for maximum therapeutic activity in mice. We plan to use this information to calculate the dosing range for our first-in-human clinical study. We believe the data from this preclinical study may be supportive of development efforts in human diseases with Th1-driven inflammation, starting with psoriasis and arthritides.

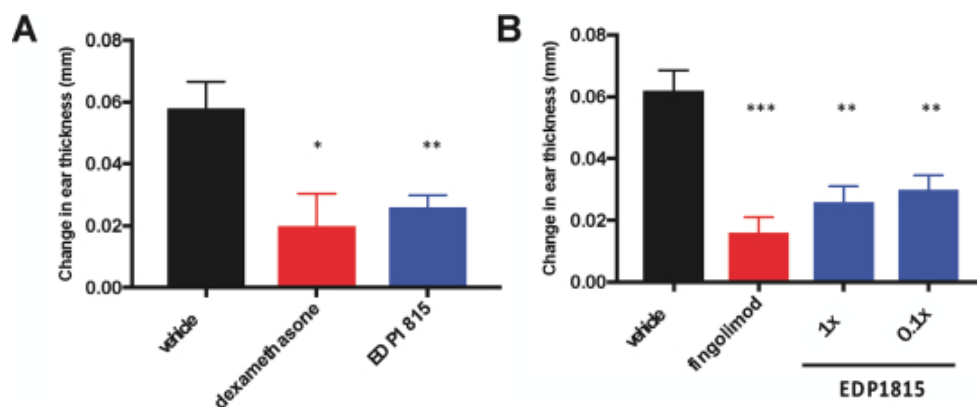


Figure 8: EDP1815 reduced skin inflammation in DTH mouse models. Mice were sensitized with a foreign antigen, keyhole limpet hemocyanin, and Complete Freund's Adjuvant subcutaneously at day zero. Mice were orally-dosed for 10 days from sensitization on day zero with (A) vehicle, dexamethasone (one mg/kg), or EDP1815, or (B) vehicle, fingolimod (supratherapeutic dose of three mg/kg), or doses of EDP1815 within a 10-fold range. Eight days after sensitization, mice were given an intradermal ear challenge with KLH. Change in ear thickness, a measure of skin inflammation, was evaluated 24 hours post-challenge. Treatment with EDP1815 resulted in greater reduction in inflammation relative to all other groups. (Significance relative to vehicle: *** = $p < 0.001$, ** = $p < 0.01$, * = $p < 0.05$)

Preclinical CIA Mouse Model

Our collaborators at Mayo Clinic observed therapeutic activity of EDP1815 in a mouse model of collagen-induced arthritis, or CIA, which is driven by a Th17 inflammatory response. In this model, CIA mice were conditioned to have autoimmune responses to their own collagen. This is intended to result in the destruction of the joints and mimic human arthritides, including rheumatoid arthritis. In the study, both therapeutic and prophylactic oral administration of EDP1815 significantly reduced disease incidence and severity, as shown in Figure 9 from our collaborators at Mayo Clinic.

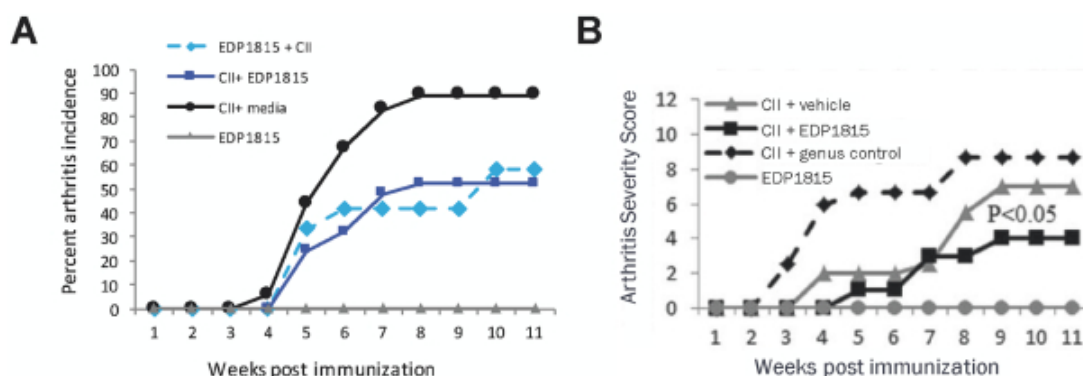


Figure 9: EDP1815 reduced arthritis incidence and severity in a mouse model of rheumatoid arthritis. Inflammatory arthritis was induced in DQ8 mice by immunization with type II collagen, or CII. Mice were treated with 100 microliters of EDP1815 every other day either before or after arthritis induction. Treatment was initiated either 10 days prior (EDP1815 + CII – prophylactic) or two weeks after CIA induction (CII + EDP1815 – therapeutic), and continued for six weeks post-immunization. (A) Both prophylactic and therapeutic dosing of EDP1815 resulted in a lower percentage of arthritis incidence compared to treatment with vehicle. A control using EDP1815 alone, without immunization with CII, showed no arthritis. (B) Arthritis severity score was also measured over time. Therapeutic treatment with EDP1815 (CII + EDP1815) significantly reduced ($p < 0.05$) arthritis severity score relative to control (CII + vehicle). A separate control with a microbe from the same genus as EDP1815 was used (CII + genus control) and did not improve arthritis severity score.

Although EDP1815 remained physically restricted to the gut and associated lymphoid tissue in our biodistribution studies, our collaborators at Mayo Clinic observed its immunomodulatory activity throughout the body in mouse models. Blood samples were taken from CIA mice to determine the effects of treatment on circulating levels of immune biomarkers. As shown in Figure 10 from our collaborators at Mayo Clinic, cytokine profiling from serum of treated mice revealed that oral administration of EDP1815 resulted in reduced levels of IL-13 and IL-17, which are relevant to diseases of Th2 and Th17 inflammation, respectively. We believe the data suggests that EDP1815 may be able to treat inflammatory diseases driven by both of these pathways.

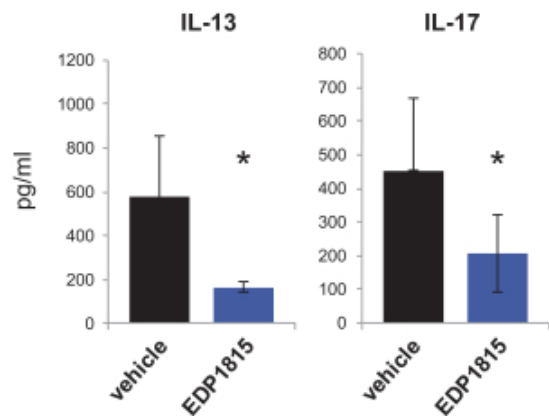


Figure 10: Oral administration of EDP1815 reduced levels of inflammatory serum cytokines. Levels of serum cytokines were evaluated in DQ8 mice immunized with type II collagen and treated with either EDP1815 or with vehicle. IL-13 and IL-17 cytokine levels were significantly reduced in the serum of EDP1815-treated mice compared to mice treated with vehicle. (Significance relevant to vehicle: * = $p<0.05$)

Preclinical EAE Mouse Model

In addition, our collaborators at Mayo Clinic tested EDP1815 in a mouse model of experimental autoimmune encephalomyelitis, or EAE. This is a model of antigen-specific Th17-driven neuro-inflammation. In the study, mice were immunized with myelin peptide. Clinical inflammation was then monitored and scored for a 30-day period. The data from the EAE model in Figure 11 from our collaborators at Mayo Clinic show that oral administration of EDP1815 significantly suppressed disease scores, which is the standard measurement for severity of paralysis in this model. These results were strain dependent—a genus control and two Gram-negative bacterial controls did not result in lower clinical disease scores.

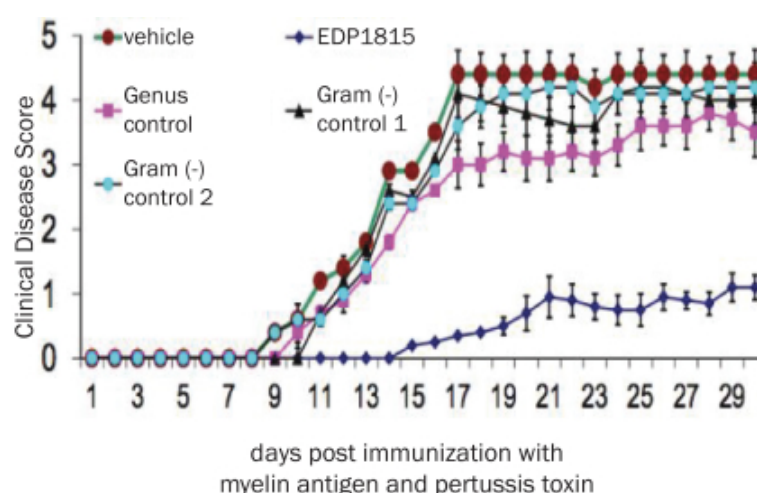


Figure 11: EDP1815 reduced disease scores in a mouse model of experimental autoimmune encephalomyelitis, or EAE. HLA-DR3.DQ8 mice were immunized with myelin peptide PLP91-110 at day zero and were orally-dosed with either vehicle, EDP1815, or other microbe controls starting on day seven. Treatment was continued every other day for a total of seven doses. EDP1815-treated mice exhibited lower daily mean clinical scores compared with mice treated with vehicle or microbe controls.

We believe that data in the above model suggests that EDP1815 anti-inflammatory activity is mediated through the Th17 pathway. Spleen cells were extracted from animals in the study and restimulated *ex vivo* with myelin to recapitulate the inflammatory response that causes disease. The results shown in Figure 12 from our collaborators at Mayo Clinic suggest that EDP1815 treatment induced an anti-inflammatory response in immune cells outside the gut, marked by downregulated IL-17 and IFN γ and upregulated IL-10. We believe this further substantiates the potential role of EDP1815 in controlling Th17-driven neuroinflammation, which is relevant to multiple sclerosis. We believe this ability to impact systemic inflammation and inhibit IL-17 and IFN γ outside of the gut may be relevant to other Th17-driven human diseases, such as psoriasis.

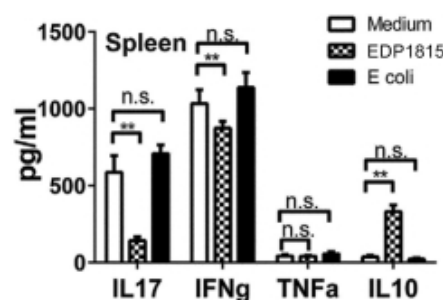


Figure 12: Splenocytes from EAE mice treated with EDP1815 produced an anti-inflammatory cytokine profile. Splenocytes from EDP1815-treated HLA-DR3.DQ8 EAE mice re-stimulated with PLP91-110 had reduced levels of inflammatory cytokines IL-17 and IFN γ and increased levels of anti-inflammatory cytokine IL-10, compared with splenocytes from medium-treated mice. Similar observations were noted when compared to mice treated with a microbe control (*E. coli*). (Significance relative to medium: ** = $p < 0.01$, ns = not significant)

Preclinical DSS Mouse Model

We also tested EDP1815 in the DSS model of gut inflammation. In this preclinical study, we observed better activity of EDP1815 compared to anti-IL-12/23 with respect to weight loss, as well as bloody stool score and tissue damage as measured by endoscopy. Anti-IL-12/23 is a mouse analog that acts through the same pathway as

ustekinumab (STELARA), an approved therapy for inflammatory bowel disease. A microbe control demonstrated no therapeutic benefit in this model. We believe that the observed activity of EDP1815 in this model suggests the potential role of EDP1815 in IBD.

Planned First-in-Human Study

The manufacturing process for EDP1815 has been established and transferred to our cGMP CMO partner. Pilot scale manufacturing is in progress. We plan to apply for Clinical Trial Authorisation in .

Oncology Portfolio

We are developing monoclonal microbials intended for the treatment of cancer. We expect to initiate clinical testing for our first oncology product candidate, EDP1503, in . We are actively evaluating and expect to select additional oncology clinical candidates through our discovery program.

We expect to conduct the first-in-human study for EDP1503, EDP1503-001, in metastatic melanoma and to evaluate EDP1503 in combination with pembrolizumab (KEYTRUDA), a PD-1 inhibitor. Both pembrolizumab-naïve and pembrolizumab-relapsed melanoma patients will be recruited into the study. The University of Chicago will conduct this investigator-sponsored study. Patients will receive a 2-week run with a single dose of EDP1503 monotherapy, administered daily, prior to receiving the combination. We will be evaluating paired biopsies taken before and at the conclusion of this 2-week run in. We expect that the study will enroll between 55 and 70 patients, with full clinical readouts for safety, tolerability and efficacy expected in .

We expect that additional oncology combination studies will be initiated in colorectal cancer and renal cell carcinoma in .

The rationale for these clinical studies is based on our preclinical data, which suggests that EDP1503 is active through different immune mechanisms beyond those targeted by checkpoint inhibitors, such as PD-1/PD-L1, or cytotoxic T-lymphocyte associated protein 4, or CTLA-4, inhibitors. Research suggests that checkpoint inhibition prevents the downregulation of the immune system induced by tumors. In preclinical models, we observed that EDP1503 stimulated upregulation of the immune response to tumors. Oral administration of EDP1503 in preclinical mouse models appeared to delay tumor progression to a similar extent as checkpoint inhibitors using different immune mechanisms. In mouse models, EDP1503 had additive effects when combined with a checkpoint inhibitor.

Multiple clinical studies have demonstrated that checkpoint inhibitor activity is dependent on underlying T-cell infiltration and tumor mutational burden. Consequently, checkpoint inhibitors alone are typically ineffective in tumors without sufficient immune cell infiltration. Furthermore, resistance to checkpoint inhibitors can arise through multiple pathways of immune escape, including downregulation of antigen-presentation pathways (*e.g.*, MHC I, TAP, LMP2, LMP7 proteins), loss of tumor antigens recognized by effector T-cells, upregulation of immunosuppressive cytokines and increased resistance of tumor cells to apoptosis.

We believe that our existing and potential monoclonal microbial product candidates have the potential to broaden the base of cancer immunotherapy. The preclinical data of EDP1503 suggests a variety of effects in mouse tumor models, including upregulation of CD8+ T-cell infiltration, increased intratumoral pro-inflammatory chemokines, upregulation of MHC Class I expression and augmentation of NK cell infiltration. We believe that the ability of a monoclonal microbial to induce these effects across multiple pathways makes it an attractive combination candidate for checkpoint inhibitors relative to other immunotherapies in development that target a single pathway.

Checkpoint inhibitors are projected to generate \$30 billion in revenue by 2025. However, efficacy of these therapies has thus far been limited to a subset of patients within select indications. Even in melanoma, where

checkpoint inhibition is considered the frontline standard of care, almost half of patients do not respond to PD-1 + CTLA-4 inhibitor combination and there is a high-unmet need for patients who relapse. In approved indications other than melanoma, the majority of patients do not benefit, with response rates ranging from only 10-30%. In renal cell carcinoma, PD-1 + CTLA-4 inhibitor combination only demonstrated benefit in a subset of frontline patients with poor to intermediate risk. Lastly, several other tumor types are not responsive to checkpoint inhibition alone. For example, in colorectal cancer, generic chemotherapy continues to be standard-of-care and PD-1 inhibitors have only shown benefit in a small proportion of late-line patients with high microsatellite instability or those who are mismatch repair-deficient. Approximately 95% of colorectal cancer patients are microsatellite stable and do not benefit from checkpoint inhibition alone. These factors suggest a substantial need for non-cytotoxic therapy options.

In all these indications, agents with differentiated immune mechanisms of action may be complementary to checkpoint inhibitors by both augmenting existing effects and testing alternative pathways of immunotherapy in checkpoint inhibitor non-responsive tumor types and patients. However, some combination approaches in oncology have been limited by the toxicity caused by dosing multiple agents concurrently. Because monoclonal microbials may work through differentiated pathways to modulate systemic immune responses without systemic exposure, we believe they may be used safely in combination with immuno-oncology agents or other standard-of-care therapies.

EDP1503

EDP1503 is a product candidate being developed to treat cancer. We selected EDP1503 based on its observed *in vitro* profile in human immune cell assays, as well as its efficacy in a range of preclinical mouse tumor models.

In Vitro Assay

Macrophages play an important role in cancer immunity, through both direct and indirect effects on other cells, including T-cells, in the tumor microenvironment. There are two broad classes of macrophages: (1) M1, which are pro-inflammatory and have anti-tumor effects; and (2) M2, which primarily have a tissue repair function and tend to block inflammation and promote tumor growth. Data from an *in vitro* screening assay, depicted in Figure 13, shows the result of co-culture of 37 distinct microbe strains with human macrophages. We assessed the strains based on their ability to polarize macrophages to an M1 or M2 type. We created an M1 control by pre-conditioning macrophages with LPS and IFN γ , putting them into a strongly pro-inflammatory state. We created an M2 control by pre-conditioning macrophages with IL-4 and IL-13, inducing an anti-inflammatory, pro-repair state. The aggregate production of pro-inflammatory cytokines, which are characteristic of M1 macrophages, is mapped on the y-axis. EDP1503 is the most M1-polarizing strain in this figure, suggesting that it has the strongest pro-inflammatory properties of the strains evaluated, which we believe is a favorable attribute of an oncology candidate.

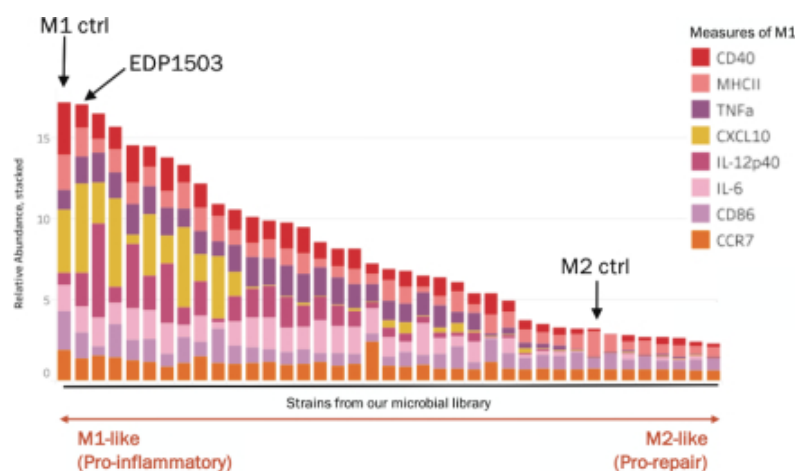


Figure 13: Induction of human macrophage inflammatory responses by EDP1503. Monoclonal microbial candidates and controls were co-cultured with macrophages purified from human peripheral blood mononuclear cells for 24 hours. Controls included LPS and IFN γ to push macrophages into a strongly pro-inflammatory state (M1 ctrl) and IL-4 and IL-13 to induce an anti-inflammatory state (M2 ctrl). Cytokine levels were evaluated at the end of the co-culture period. Of all monoclonal microbial tested, EDP1503 induced the highest aggregate level of pro-inflammatory cytokines.

We also tested these strains for their ability to drive antigen-dependent activation of human T-cells. In a separate *in vitro* assay, we co-cultured human dendritic cells with different microbes from our library for 24 hours. We then removed the microbes and tested the ability of respective microbe-conditioned dendritic cells to enhance the inflammatory response of human CD8 T-cells. T-cell response was evaluated through production of IFN γ by human CD8 T-cells stimulated by a MHC Class I peptide pool, a marker of T-cell activation. EDP1503 was one of the highest inducers of antigen-specific CD8 T-cell IFN γ responses, which we believe suggests it may have the ability to significantly enhance inflammatory T-cell responses in humans.

Preclinical Melanoma and Colon Cancer Mouse Models

We also tested EDP1503 in mouse models of melanoma and colon cancer, shown in Figure 14. In a melanoma model, we administered EDP1503 daily beginning eight days after tumor implantation in mice, as depicted in Figure 14A below. Reduction in tumor volume was similar to that observed with an anti-PD-L1 antibody, a mouse analog of the current standard of care in melanoma. Furthermore, EDP1503 showed an additive effect with an anti-PD-L1 antibody, further reducing tumor volume. We observed similar results in a colon cancer model shown in Figure 14B. EDP1503 activity was comparable to an anti-PD-1 antibody and showed additive activity in combination with an anti-PD-1 antibody. We believe these models suggest that orally-delivered EDP1503 is able to induce systemic anti-tumor effects in mice, which may support clinical development in a range of solid tumors. Multiple experiments conducted by a variety of contract research organizations reproduced these results, suggesting that the results were not dependent on specific experimental conditions or on the background microbiota of the mice.

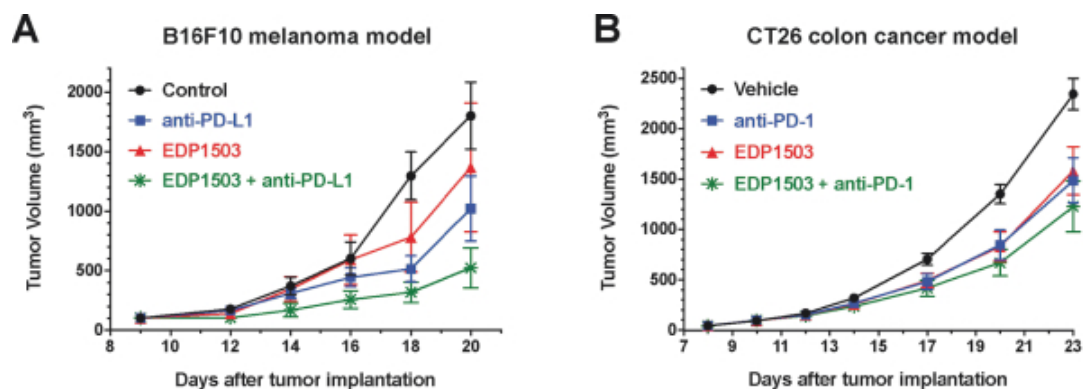


Figure 14: EDP1503 slowed progression of tumors in syngeneic tumor models. (A) B16.F10 melanoma cells were implanted subcutaneously in mice. Treatment was initiated at day nine when tumors reached a volume of 100 mm³. (B) CT26 colon cancer cells were implanted subcutaneously in mice. Treatment was initiated at day seven when tumors reached a volume of 100 mm³. In both models, vehicle and EDP1503 were given orally daily and anti-PD-1/L1 antibodies were administered intra-peritoneally every four days. Mean tumor volumes were recorded at multiple timepoints. EDP1503 demonstrated anti-tumor activity as a monotherapy and in combination with anti-PD-1/L1 antibodies in both tumor models.

Additional testing in the colon cancer model suggested that the anti-tumor activity of EDP1503 was dose-dependent over a 100-fold range. Ascending doses varied by a factor of ten. When we assessed mean tumor volume 11 days post-treatment, activity at higher doses of EDP1503 was comparable to an anti-PD-1 antibody. By showing that the highest dose we evaluated did not significantly increase therapeutic effect over a slightly lower dose, we gained a better understanding of the maximum therapeutic activity in mice. We used this information to calculate the dose for our first-in-human clinical study.

Ex Vivo Analyses of Colon Cancer Mouse Model

Research suggests that T-cell infiltration into tumors is important for immunotherapeutic responses in oncology patients on the right. In an *ex vivo* analysis of a CT26 mouse tumor study, we used a CD3 cell surface marker on dissected tumor sections to identify all T-cells as shown on the left in Figure 15 below. The graphs depicted in Figure 15 plot the total number of T-cells in a defined microscopic view of tumors, treated with EDP1503 or vehicle, respectively. The tumors in mice treated with EDP1503 had increased T-cell infiltration relative to vehicle-treated mice. The increases correlated with therapeutic activity on tumor growth. We have observed in separate preclinical experiments that the majority of these infiltrating T-cells are positive for the T-cell marker CD8, which identifies T-cells thought to be particularly important for killing tumor cells in patients.

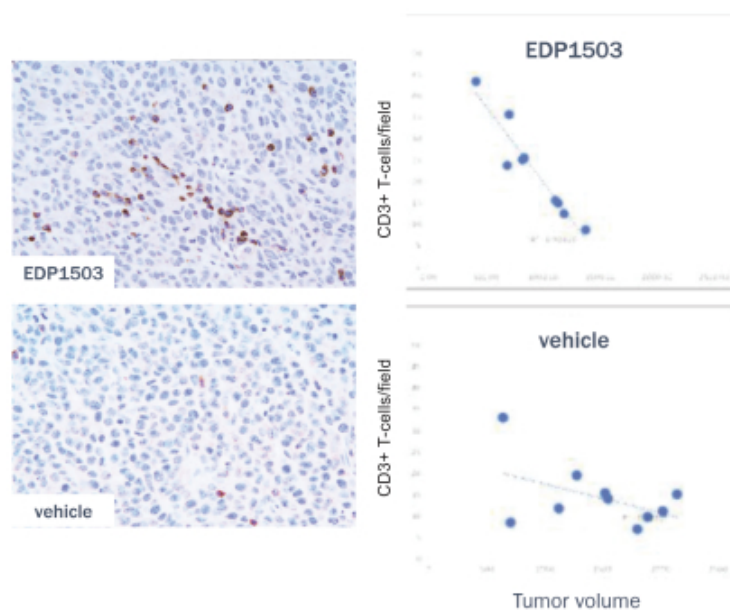


Figure 15: EDP1503 induced T-cell infiltration into tumors. Microscopy images show CD3+ T-cell infiltration in defined microscopic fields of CT26 mouse tumors treated with EDP1503 or vehicle (left). Quantitation of CD3+ T-cell infiltration was plotted against tumor volume. EDP1503 treated mice show greater T-cell infiltration in tumors, with the extent of infiltration being greater in smaller tumors (right).

CXCL10 is a protein hormone of the immune system, or a chemokine, which is produced in response to IFN γ . CXCL9 is also produced under similar conditions. Clinical research has demonstrated that melanoma patients that have a high concentration of CXCL10 in their tumors have a significantly better prognosis.

As depicted in Figure 16, we removed colon tumor tissue from a mouse model following treatment with vehicle, anti-PD-1 antibody, EDP1503 or a combination of EDP1503 and anti-PD-1 antibody, and then extracted lymphocytes that had infiltrated the treated tumor. We then tested these lymphocytes for their ability to produce CXCL9 and CXCL10. Lymphocytes from EDP1503-treated tumors induced CXCL9, while those from anti-PD-1 antibody-treated tumors did not. However, we did observe a synergistic effect in combination treated tumors. Lymphocytes from EDP1503-treated tumors more highly induced CXCL10 than those treated with anti-PD-1 antibody and the effect of EDP1503 was greater when used in combination with anti-PD-1.

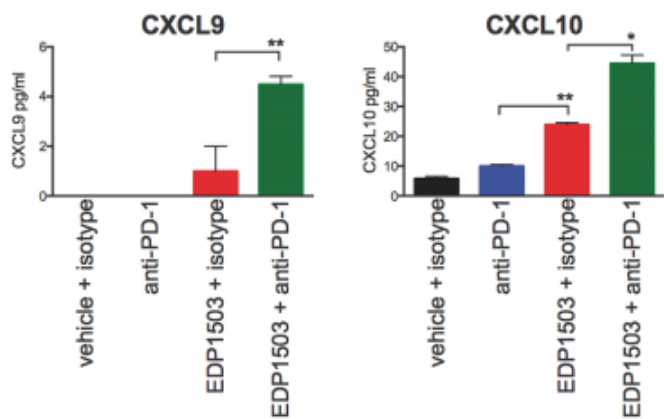


Figure 16: EDP1503 induced production of CXCL9 and CXCL10 in tumors. Secretion of pro-inflammatory chemokines, CXCL9 and CXCL10, by CD8+ T-cells recovered from explanted CT26 tumors in mice treated with anti-PD-1 antibody, EDP1503, or the combination. Compared to anti-PD-1 antibody alone, both EDP1503 monotherapy and combination resulted in greater CXCL9 and CXCL10 secretion by tumor infiltrating lymphocytes. (Significance relative to vehicle: ** = $p<0.01$; * = $p<0.05$)

We believe these data suggest that the action of EDP1503 on the gut-body network matched the anti-tumor effect of checkpoint inhibitors using different immune mechanisms. This effect was marked by enhanced T-cell infiltration into tumors, secretion of pro-inflammatory chemokines, upregulation of MHC Class I expression and augmentation of NK cell infiltration. We believe this profile offers a range of potential opportunities for improved immuno-oncology treatments.

Biodistribution and Pharmacokinetics

We have used two techniques to determine the pharmacokinetics and biodistribution of EDP1503 *in vivo* in mice: fluorescence microscopy and strain-specific PCR primers.

First, using fluorescence microscopy, we have shown in Figure 17 that labeled EDP1503 reaches the gut epithelium, which we believe is the site of action of the gut-body network.

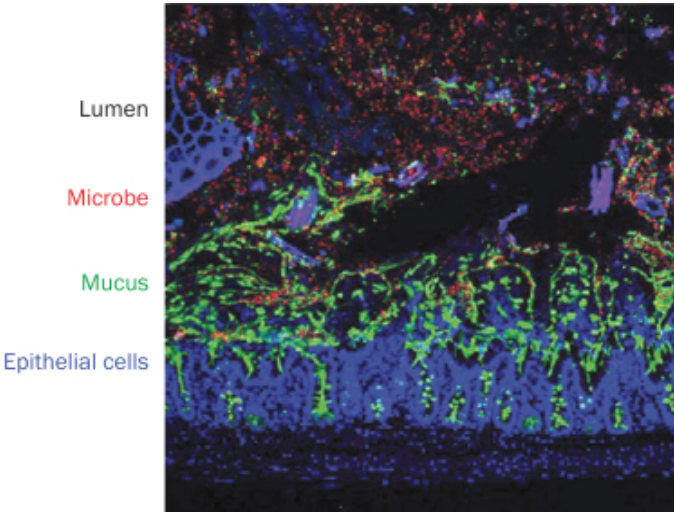


Figure 17: Fluorescence microscopy showing distribution of EDP1503 in the small intestine of a mouse. Mice were treated with a single oral administration of EDP1503, which was covalently labeled with DIBAC-Cy5 (red). A section of small intestine was stained with anti-MUC2 (green), which stains mucus, and DNA-containing epithelial cells were stained with DAPI (blue). EDP1503 (red) is found both free within the lumen, as well as penetrating the mucus layer to the cells of the gut epithelium where it interacts with the gut-body network.

We believe that EDP1503 has an ability to engage with target immune cells *in vivo*. In the experiment plotted in Figure 18, we gave mice oral doses of 10^8 or 10^9 fluorescently labeled EDP1503. After three hours, we removed mesenteric lymph nodes. Mesenteric lymph nodes are the lymph nodes that monitor immune activity in the gut. We broke down the lymph nodes into single cells and then assayed them on a fluorescence activated cell analyzer to determine the level of physical engagement between EDP1503 and antigen-presenting cells, such as macrophages (CX3CR1+) and dendritic cells (CD103+). Our observations suggest a dose-dependent association of EDP1503 with the target immune cells above the background of vehicle control. We believe this is consistent with the proposed mechanism of action of EDP1503 and its dose-dependent activity in a colon cancer model.

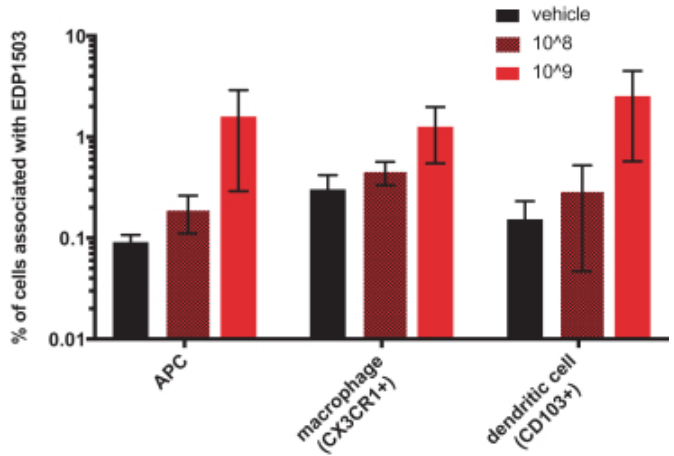


Figure 18: EDP1503 associated with antigen-presenting cells in the mesenteric lymph nodes. Mice were treated with vehicle or 10^8 or 10^9 DIBAC-Cy5 labeled EDP1503. Mesenteric lymph nodes were collected and sorted by flow cytometry, with the proportion of Cy5+ events recorded for each cell type. Increasing proportions of macrophages and dendritic cells show association with EDP1503 with increasing oral dose.

Second, we also used PCR primer pairs specific for EDP1503 to track the passage of EDP1503 through the gut of mice and detected its presence in other tissues. After a single oral dose, EDP1503 cleared from the small intestine within 16 hours and from the colon and stool within 24 to 48 hours. There was no evidence of persistence or colonization either in this model or in the longer-term multi-dose tumor models. The exposure of EDP1503 in other body sites was negligible.

Planned First-in-Human Study

We expect that the first-in-human clinical study EDP1503-001 will be conducted at the University of Chicago and that the first patient will be dosed in . Clinical EDP1503 cGMP drug substance has been manufactured and drug product is currently being manufactured. We met with the FDA in a pre-IND meeting in November 2017 where we discussed the path to clinical testing for EDP1503.

New Candidate Discovery

Our *in vitro* and *in vivo* assays continue to identify novel monoclonal microbial strains that have the potential to become product candidates. As an example, we identified ES1114 from our monoclonal microbial library as a potential candidate. We have tested ES1114 in the same two mouse tumor models as EDP1503. As depicted in the charts in Figure 19, it had comparable activity to anti-PD-1 antibody in a colon cancer model and showed additive activity to anti-PD-L1 antibody in a melanoma model.

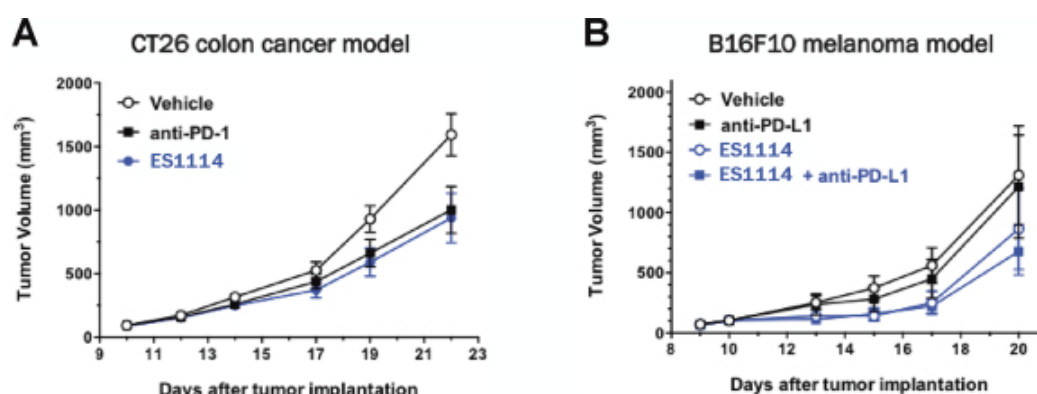


Figure 19: ES1114 slowed progression of tumors in syngeneic tumor models. (A) Mice were implanted subcutaneously with CT26 cells. Treatment was initiated at day 10 when tumors reached a volume of 100 mm³. (B) Mice were implanted subcutaneously with B16F10 melanoma cells. Treatment was initiated at day nine when tumors reached a volume of 100 mm³. In both models, vehicle and ES1114 were given orally daily, and anti-PD-1/L1 antibodies were administered intra-peritoneally every four days. Mean tumor volumes were recorded at multiple timepoints. ES1114 demonstrated anti-tumor activity as monotherapy and in combination with anti-PD-L1 antibody in the B16F10 melanoma model.

Additional *in vitro* and *in vivo* studies, as well as feasibility for manufacturing process development, are underway with ES1114 and other leads for potential additional oncology product candidates.

Manufacturing

We have developed proprietary methods for the manufacture of pharmacologically active monoclonal microbes that are scalable and transferable to a cGMP manufacturing environment. Monoclonal microbes are isolated, proliferated and purified in a manner analogous to development of pharmaceutical drugs. Monoclonal microbes maintained activity through lyophilization, a controlled dehydration process that makes our candidates suitable for oral administration. Additionally, we have established robust methods to validate the quality, identity, purity and potency of monoclonal microbes. These methods allow us to release consistent batches of material, consistent with cGMP.

Our internal manufacturing capabilities include non-cGMP production using small-scale quantities for characterization of *in vitro* and *in vivo* preclinical assessment of product candidates. We currently rely on third-party manufacturers for the production of materials for clinical studies. Our internal personnel have extensive cGMP manufacturing experience to ensure efficient technology transfer and oversee the process conducted by third-party manufacturers. Our agreements with third-party manufacturers include confidentiality and intellectual property provisions to protect our proprietary rights to our monoclonal microbial candidates.

We expect our third-party manufacturers will be able to meet manufacturing requirements and drug supply required by our clinical studies. We have dedicated resources from third-party manufacturers for the development and manufacture of our monoclonal microbial candidates for near-term development. We believe that these relationships are integral to ensuring reliable, high-quality drug supply for clinical development.

While we do not have a current need for commercial manufacturing capacity, we intend to evaluate both building internal capabilities and contracting with additional third-party manufacturers at the appropriate time.

Process development and manufacturing are critical for translation of monoclonal microbials. We believe our internal expertise and external partnerships have allowed us to address unique challenges associated with monoclonal microbial manufacturing. Some of these major challenges include: limited prior know-how in the field for novel microbes; strict anaerobic growth conditions required by many commensal microbes; and temperature and oxygen sensitivities that affect downstream processing.

Our proprietary methods for the manufacture of pharmacologically active monoclonal microbials address these three major challenges, potentially providing a distinct competitive advantage. Many human commensals are strict anaerobes with no prior development precedent. Process development of commensal microbes requires strong technical expertise in anaerobic fermentation. We are pioneering internal anaerobic capabilities that allow for development of reproducible fermentation processes. We continue to optimize our process across several parameters. In the case of EDP1815, as depicted in Figure 20, our data indicate that our proprietary process has increased yield by four logs.

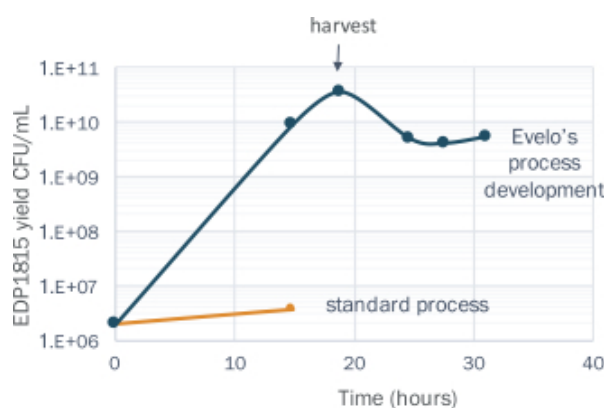


Figure 20. Our process development defines fermentation parameters for EDP1815. Fermentation profile for EDP1815 when grown according to an industry standard fermentation process (orange) and our process (blue).

Our monoclonal microbial manufacturing unit operations consist of drug substance and drug product development. We have established expertise across all aspects of drug substance manufacturing including cell banking, seed training, fermentation, centrifugation, formulation and lyophilization. Our high-throughput fermentation system enables rapid process optimization and delivers material for research use. We have also advanced knowledge related to drug product manufacturing, including dispensing, blending, encapsulation, coating and packaging. For our planned first-in-human clinical trials, we are optimizing drug product with

regards to appearance, identity, total cell count, viable cell count, moisture content, capsule disintegration and purity. Drug product also has demonstrated stability at both long-term storage temperature and accelerated temperature. We will continue to advance novel formulation technologies for enhanced delivery and activity in future trials.

Sales and Marketing

Given the current developmental stage of our product candidates and platform, we have not yet established a commercial organization. We intend to commercialize our products globally and in multiple disease areas. We intend to do this both through selectively building our own sales and marketing team and partnering or collaborating with third parties.

Intellectual Property

We strive to protect the proprietary technology that we believe is important to our business, including seeking and maintaining patents intended to cover our both our broad platform and individual product candidates. We seek to obtain domestic and international patent protection, and endeavor to promptly file patent applications for new commercially valuable inventions. We also rely on trade secrets to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection.

We plan to continue to expand our intellectual property estate by filing patent applications directed to pharmaceutical compositions, methods of treatment, methods of manufacture, methods for patient selection created or identified from our ongoing development of our product candidates, as well as discovery based on our proprietary platform. Our success will depend on our ability to obtain and maintain patent and other proprietary protection for commercially important technology, inventions and know-how related to our business, defend and enforce any patents that we may obtain, preserve the confidentiality of our trade secrets and operate without infringing the valid and enforceable patents and proprietary rights of third parties. We also rely on know-how and continuing technological innovation to develop and maintain our proprietary position and, in the future, may rely on or leverage in-licensing opportunities.

The patent positions of biopharmaceutical companies like us are generally uncertain and involve complex legal, scientific and factual questions. In addition, the coverage claimed in a patent may be challenged in courts after issuance. Moreover, many jurisdictions permit third parties to challenge issued patents in administrative proceedings, which may result in further narrowing or even cancellation of patent claims. We cannot predict whether the patent applications we are currently pursuing will issue as patents in any particular jurisdiction or at all, whether the claims of any patent applications, should they issue, will cover our product candidates, or whether the claims of any issued patents will provide sufficient protection from competitors or otherwise provide any competitive advantage.

Because patent applications in the United States and certain other jurisdictions are maintained in secrecy for 18 months or potentially even longer, and because publication of discoveries in the scientific or patent literature often lags behind actual discoveries and patent application filings, we cannot be certain of the priority of inventions covered by pending patent applications. Accordingly, we may not have been the first to invent the subject matter disclosed in some of our patent applications or the first to file patent applications covering such subject matter, and we may have to participate in interference proceedings or derivation proceedings declared by the United States Patent and Trademark Office, or USPTO, to determine priority of invention.

Patent Portfolio

Our patent portfolio includes patent applications in varying stages of prosecution in the United States and selected ex-US jurisdictions. As of February 20, 2018, our patent portfolio consists of seven issued patents and 57 pending applications. Of the patents in our portfolio, two are owned by us, four are exclusively licensed from

Mayo Clinic and one is exclusively licensed from the University of Chicago. Of the pending applications in our portfolio, 33 are owned by us, 23 are exclusively licensed to us from the University of Chicago and one is exclusively licensed to us from Mayo Clinic. The patent portfolio includes patents and applications covering the following:

- An oral oncology platform exclusively licensed from the University of Chicago, consisting of one issued patent and 23 pending applications. Patents in this family are expected to expire in 2036.
- A translational *in vitro* assay platform developed by us, consisting of one pending provisional application. Any applications claiming priority to this provisional application that issue as a patent are expected to expire in 2038.
- A formulation platform consisting of one pending provisional application. Any applications claiming priority to this provisional application that issue as a patent are expected to expire in 2038.
- A modality platform consisting of two pending provisional applications. Any applications claiming priority to these provisional applications that issue as a patent are expected to expire in 2038.
- Inflammation portfolio:
 - EDP1815, consisting of four issued patents in-licensed from Mayo Clinic, one pending application in-licensed from Mayo Clinic (the patents and application from Mayo Clinic expected to expire in 2030) and two Evelo-owned pending provisional applications. Any applications claiming priority to these provisional applications that issue as a patent are expected to expire in 2038; and
 - EDP1066, consisting of one pending provisional application. Any applications claiming priority to this provisional application that issue as a patent are expected to expire in 2038.
- Oncology portfolio:
 - EDP1503, consisting of protection under the oral oncology platform exclusively licensed from the University of Chicago and one Evelo-owned pending provisional application. Any applications claiming priority to this provisional application that issue as a patent are expected to expire in 2038; and
 - ES1114, consisting of two Evelo-owned pending provisional applications. Any applications claiming priority to these provisional applications that issue as a patent are expected to expire in 2038.

Patent Term

The base term of a U.S. patent is 20 years from the filing date of the earliest-filed non-provisional, patent application from which the patent claims priority. The term of a U.S. patent can be lengthened by patent term adjustment, which compensates the owner of the patent for administrative delays at the USPTO. In some cases, the term of a U.S. patent is shortened by terminal disclaimer that reduces its term to that of an earlier-expiring patent.

The term of a U.S. patent may be eligible for patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Act, to account for at least some of the time the drug is under development and regulatory review after the patent is granted. With regard to a drug for which FDA approval is the first permitted marketing of the active ingredient, the Hatch-Waxman Act allows for extension of the term of one U.S. patent that includes at least one claim covering the composition of matter of such an FDA-approved drug, an FDA-approved method of treatment using the drug and/or a method of manufacturing the FDA-approved drug. The extended patent term cannot exceed the shorter of five years beyond the non-extended expiration of the patent or fourteen years from the date of the FDA approval of the drug, and a patent cannot be extended more than once or for more than a single product. During the period of extension, if granted, the scope of exclusivity is limited to the approved product for approved uses. Some foreign jurisdictions,

including Europe and Japan, have analogous patent term extension provisions, which allow for extension of the term of a patent that covers a drug approved by the applicable foreign regulatory agency. In the future, if and when our product candidates receive FDA approval, we expect to apply, if appropriate, for patent term extension on patents covering those product candidates, their methods of use and/or methods of manufacture.

Trade Secrets

In addition to patents, we rely on trade secrets and know-how to develop and maintain our competitive position. We typically rely on trade secrets to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection. We protect trade secrets and know-how by establishing confidentiality agreements and invention assignment agreements with our employees, consultants, scientific advisors, contractors and collaborators. These agreements provide that all confidential information developed or made known during the course of an individual or entities' relationship with us must be kept confidential during and after the relationship. These agreements also provide that all inventions resulting from work performed for us or relating to our business and conceived or completed during the period of employment or assignment, as applicable, shall be our exclusive property. In addition, we take other appropriate precautions, such as physical and technological security measures, to guard against misappropriation of our proprietary information by third parties.

License Agreements

We are a party to several license agreements under which we license patents, patent applications and other intellectual property. The licensed intellectual property includes composition of matter and methods of using monoclonal microbials. In some cases, licenses cover physical material in the form of microbial strains. Certain diligence and financial obligations are tied to these agreements. We consider the following license agreements and assignments to be material to our business.

University of Chicago License Agreement

In March 2016, we entered into an exclusive license agreement with the University of Chicago. This agreement gives us an exclusive, worldwide, sublicensable license to patent rights related to administration of microbes to treat cancer. Under this agreement, we may make, have made, use, import, have sold, offer to sell, and sell microbial products to treat cancer in combination with checkpoint inhibitors. Many microbial genera are covered by these patent rights, including *Bifidobacterium*, which encompasses our lead oncology candidate, EDP1503. In addition, we have a non-exclusive, worldwide license to use technical information disclosed to us by the University of Chicago for the development and commercialization of microbial products to treat cancer in combination with checkpoint inhibitors. Under this agreement, we must use commercially reasonable efforts to develop and market licensed products. Commercially reasonable efforts can be demonstrated by achieving specific milestones by specific dates.

Pursuant to the terms of the license agreement, we paid the University of Chicago an upfront fee of an amount less than \$500,000 and are required to make low five-digit license maintenance fees on an annual basis, creditable against royalties owed in that given year. In addition, we may owe the University of Chicago future milestone payments totaling an aggregate of approximately \$60.9 million upon achievement of specific milestones, the vast majority of which are associated with specific regulatory and commercial milestones.

The University of Chicago is entitled to receive low single-digit percentage royalties on annual net sales of products that fall under the licensed patent rights on a country-by-country and product-by-product basis. The royalty percentage depends on the amount of annual net sales and whether the product is covered by valid patent claims, un-published technical information, or published technical information. Our valid claims royalty obligations to the University of Chicago will expire upon the later of (a) expiration of the last-to-expire valid claim covering the product, or (b) the expirations of regulatory exclusivity of a product covered by the patent

rights. Technical information royalty obligations will expire upon the earlier of (a) a set number of years in the mid-teens from first commercial sale of the applicable product, or (b) until a substantially similar product comes onto the market.

Under the license agreement, we have the right to sublicense licensed rights to third parties, provided that the sublicense agreement is consistent with the terms of the original license and that we hold any sublicensees compliant. Should we enter a sublicense under these patent rights, we are required to pay the University of Chicago a percentage of our sublicense revenue. The University of Chicago is entitled to percentages of sublicense revenue in the low- to mid-teens depending on the stage of development of licensed products at the time the sublicense is entered.

The University of Chicago maintains control of patent prosecution, defense and maintenance on their patent rights. We are responsible for reimbursing the University of Chicago for patent costs incurred. If we cease payment for patent prosecution, our patent rights will terminate and revert to the University of Chicago. We have the first right, but not obligation, to control any post grant proceedings and to take action in the prosecution or prevention of any infringement by a third party to patent rights.

The license granted by the University of Chicago is subject to any retained rights of the US government in the patent rights and to retained rights of the University of Chicago to use the patent rights for non-commercial research purposes. The license agreement will expire on a country-by-country and product-by-product basis on the later of (a) expiration date of the last to expire licensed patents, or (b) a set number of years in the mid-teens from first commercial sale of a licensed product. Prior to the expiration date, we may terminate the license with written notification to the University of Chicago. Prior to the expiration date, the University of Chicago may terminate the agreement in whole or in part if we fail to make payments within thirty days of receiving a written notice of missed payment, if we breach any material obligation of the agreement and do not cure such breach within thirty days, if we become bankrupt or insolvent, or if we are dissolved or liquidated. The University of Chicago may also terminate the license if we fail to show commercially reasonable efforts in meeting diligence milestones.

License Agreement with Mayo Clinic

In August 2017, we entered into an agreement with the Mayo Foundation for Medical Education and Research, an affiliate of Mayo Clinic, or Mayo Clinic, to license intellectual property and microbial strains. This agreement gives us an exclusive, worldwide, sublicensable license to patent rights related to compositions of matter and methods of using microbes from a specific species to treat autoimmune and inflammatory diseases. In addition to patent rights, this agreement also includes an exclusive, worldwide, sublicensable license to an immuno-modulatory microbial strain isolated from a human small intestinal sample by Mayo Clinic. Under the licensed patent rights and/or using the licensed microbial strain, we may make, have made, use, offer for sale, sell, and import products containing microbes of a specific species to treat autoimmune and inflammatory diseases. In addition, we have a non-exclusive, worldwide license to use know-how disclosed to us by Mayo Clinic related to the development and commercialization of products containing microbes of a specific species to treat autoimmune and inflammatory diseases. The licensed patents include four issued U.S. patents and one pending U.S. patent application. Issued claims cover compositions containing microbes from a specified species and methods of using these compositions to treat all autoimmune and inflammatory diseases. EDP1815, one of our lead candidates in the inflammation program, contains the microbial strain licensed from Mayo Clinic and is covered by these patent rights. Under this agreement, we must use commercially reasonable efforts to bring licensed products to the market.

In consideration for the licenses, we paid Mayo Clinic an upfront payment of \$225,000. Beginning on the second anniversary of the effective date, we will owe Mayo Clinic escalating annual license maintenance fees in the low- to mid-five digits. Annual license maintenance fees count towards milestones and royalties owed in a given year. Mayo Clinic is entitled to future clinical, approval and sales milestones. We may owe Mayo Clinic

future milestone payments totaling a maximum of \$960,000 upon achievement of specific development milestones and \$55 million upon achievement of specific regulatory and commercial milestones.

Mayo Clinic will receive low single-digit percentage royalties on annual net sales of products that fall under the licensed patent rights or contain the licensed microbial strain on a country-by-country and product-by-product basis. The royalty percentage depends on the amount of annual net sales and whether the product is covered by valid patent claims or contains the licensed microbial strain. Royalties on products containing the licensed microbial strain will only be due in countries where licensed products are not covered by valid claims. Our valid claims royalty obligations to Mayo Clinic will terminate on expiration of the last-to-expire valid claim covering the product. Royalty obligations on products containing the licensed microbial strain will expire 15 years from the first commercial sale of the licensed product.

Under the license agreement, we have the right to sublicense licensed patent rights and the licensed microbial strain to third parties through multiple tiers, provided that the sublicense agreement is on substantially the same terms as the original license and that we are responsible for the performance of its sublicensees. We must obtain Mayo Clinic's permission to grant any fully paid-up, royalty-free or exclusive sublicenses. We have no financial obligations to Mayo Clinic related to sublicenses.

Mayo Clinic has the responsibility to prepare, file, prosecute or abandon its patent rights. We may provide prior comment and advice to Mayo Clinic and we are responsible for reimbursing Mayo Clinic for past and future patent costs. If we cease payment for patent preparation, filing or prosecution, our patent rights will terminate and revert to Mayo Clinic. We have the first right, but not obligation, to control any post grant proceedings and to take action in the prosecution or prevention of any infringement by a third party to patent rights.

The license granted by Mayo Clinic is subject to any retained rights of the US government in the patent rights and to retained rights of Mayo Clinic to use the patent rights and licensed microbial strain for non-commercial research purposes, which excludes human use. The license to patent rights will expire on a country-by-country and product-by-product basis upon the expiration date of the last to expire licensed patents. The license to Mayo Clinic's microbial strain will expire 15 years from first commercial sale of a product containing the licensed microbial strain. Prior to the expiration date, Mayo Clinic may terminate the license if we fail to make payments within thirty days of receiving a written notice of missed payment, if we breach any material obligation of the agreement and do not cure such breach within thirty days, if we become bankrupt or insolvent, or if we or any sublicensee directly or indirectly brings suit against Mayo Clinic. Upon early termination of our license, any sublicensee that is not in material breach of the agreement will have the right to retain its sublicense to the patent rights and microbial strain. We do not have the right to terminate the agreement prior to the expiration date.

Competition

The biotechnology and pharmaceutical industries are characterized by rapid growth and a dynamic landscape of proprietary therapeutic candidates. While we believe that our monoclonal microbial platform and candidates, coupled with our resources and industry expertise, give us a competitive advantage in the field, we face competition from a variety of institutions, including larger pharmaceutical companies with more resources. Specialty biotechnology companies, academic research institutions, governmental agencies, as well as public and private institutions are also potential sources of competitive products and technologies.

In both inflammatory diseases and oncology, we anticipate intensifying competition as new therapies are approved and advanced technologies become available. Many of our competitors, either alone or with strategic partners, have considerably greater financial, technical, and human resources than we do. Competitors may also have more experience developing, obtaining approval for, and marketing novel treatments in the indications we are pursuing. These factors could give our competitors an advantage over us in recruiting and retaining qualified personnel, completing clinical development, and commercializing their products. Competitors that are able to

obtain FDA or other regulatory approval for their products more rapidly than we can for our products may also establish a stronger market position, diminishing our commercial opportunity. Key considerations that would impact our capacity to effectively compete include the efficacy, safety, ease of use, as well as pricing and reimbursement of our products.

Significant competition exists in the immuno-oncology field, where we are developing our first product candidates. Although our monoclonal microbial approach is unique from most other existing or investigational therapies in immuno-oncology, we will need to compete with all currently or imminently available therapies within the indications where our development is focused. Although there is a wide range of potentially competitive mechanisms, possible synergies between these and monoclonal microbials will also be evaluated.

The main classes of immunotherapy that are available or are being evaluated by our competitors include:

- **Checkpoint inhibitors:** Agenus Inc., AstraZeneca plc, Bristol-Myers Squibb, F. Hoffmann-La Roche .G., Incyte Corporation, Merck & Co., Pfizer Inc.; and
- **Cell therapy:** Celgene Corporation, Gilead Sciences, Inc., Juno Therapeutics Inc. and Novartis International A.G.

In autoimmune or inflammatory diseases, there is also a wide range of competitors that we will be challenged by. In later stages of disease, the majority of competition will stem from companies marketing or developing biologics and novel small molecule therapies, such as AbbVie Inc., Johnson & Johnson, Pfizer Inc, Novartis International A.G., Regeneron Pharmaceuticals, Inc. and Sanofi S.A. Potentially competing mechanisms of action include TNF, IL-4, IL-17, and JAK inhibitors. Novel delivery of biologics, particularly via oral administration, and the entry of biosimilars will also add to competition within the therapeutic area.

Government Regulation

The FDA and other regulatory authorities at federal, state and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety, effectiveness, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring and post-approval reporting of drugs and biologics such as those we are developing. We, along with our contract manufacturers, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or seek approval for our product candidates. The process of obtaining regulatory approvals and ensuring subsequent compliance with appropriate federal, state, local and foreign statutes and regulations requires the expenditure of substantial time and financial resources.

In the United States, the FDA regulates drug and biologic products under the Federal Food, Drug and Cosmetic Act, its implementing regulations and other laws, including, in the case of biologics, the Public Health Service Act. Our product candidates are subject to regulation by the FDA as biologics. Biologics require the submission of a biologics license application, or BLA, and licensure, which constitutes approval, by the FDA before being marketed in the United States. None of our product candidates has been approved by the FDA for marketing in the United States, and we currently have no BLAs pending. If we fail to comply with applicable FDA or other requirements at any time during product development, clinical testing, the approval process or after approval, we may become subject to administrative or judicial sanctions. These sanctions could include the FDA's refusal to approve pending applications, suspension or revocation of approved applications, warning letters, product recalls, product seizures, total or partial suspensions of manufacturing or distribution, injunctions, fines, civil penalties or criminal prosecution. Any FDA enforcement action could have a material adverse effect on us.

The process required by the FDA before our biologic product candidates may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests and animal studies performed in accordance with the FDA's good laboratory practice, or GLP, regulations;
- submission to the FDA of an IND, which must become effective before clinical trials in the United States may begin;
- performance of adequate and well-controlled human clinical trials to establish the safety and efficacy of the product candidate for each proposed indication, conducted in accordance with the FDA's good clinical practice, or GCP, regulations;
- submission to the FDA of a BLA;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the product is produced to assess compliance with cGMP regulations; and
- FDA review and approval of the BLA prior to any commercial marketing, sale or shipment of the product.

The testing and approval process requires substantial time, effort and financial resources, and we cannot be certain that any approvals for our product candidates will be granted on a timely basis, if at all.

Preclinical and Clinical Trials

Once a product candidate is identified for development, it enters the preclinical testing stage. Preclinical studies include laboratory evaluations of drug chemistry, formulation and stability, as well as studies to evaluate toxicity in animals, which must be conducted in accordance with GLP requirements. The results of the preclinical studies, together with manufacturing information and analytical data, are submitted to the FDA as part of an IND. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises concerns or questions about the conduct of the clinical trial, including concerns that human research subjects will be exposed to unreasonable health risks, and imposes a clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. Submission of an IND may result in the FDA not allowing clinical trials to commence or not allowing clinical trials to commence on the terms originally specified in the IND. A separate submission to an existing IND must also be made for each successive clinical trial conducted during product development, and the FDA must grant permission, either explicitly or implicitly by not objecting, before each clinical trial can begin.

Clinical trials involve the administration of the product candidate to human subjects under the supervision of qualified investigators. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial and the parameters and criteria to be used in monitoring safety and evaluating effectiveness. Each protocol must be submitted to the FDA as part of the IND. An independent institutional review board, or IRB, for each investigator site proposing to participate in a clinical trial must also review and approve the clinical trial before it can begin at that site, and the IRB must monitor the clinical trial until it is completed. The FDA, the IRB, or the sponsor may suspend or discontinue a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk. Clinical testing also must satisfy extensive GCP requirements, including requirements for informed consent.

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

- *Phase 1*—Phase 1 clinical trials involve initial introduction of the investigational product into healthy human subjects or patients with the target disease or condition. These studies are typically designed to

test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence of effectiveness.

- *Phase 2*—Phase 2 clinical trials typically involve administration of the investigational product to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks.
- *Phase 3*—Phase 3 clinical trials typically involve administration of the investigational product to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval and physician labeling.

In some cases, the FDA may condition approval of a BLA on the sponsor's agreement to conduct additional clinical trials to further assess the biologic's safety and effectiveness after BLA approval. Such post-approval clinical trials are typically referred to as Phase 4 clinical trials.

Although most clinical research performed in the United States in support of a BLA must be authorized in advance by the FDA, under the IND regulations and procedures described above, there are certain circumstances under which clinical trials can be conducted without submission of an IND. For example, a sponsor who wishes to conduct a clinical trial outside the United States may, but need not, obtain FDA authorization to conduct the clinical trial under an IND.

Progress reports detailing the results of the clinical trials, among other information, must be submitted at least annually to the FDA and written IND safety reports must be submitted to the FDA and the investigators for serious and unexpected suspected adverse events, findings from other studies or animal or *in vitro* testing that suggest a significant risk for human subjects and any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure.

Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the biologic and finalize a process for manufacturing the biologic in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and manufacturers must develop, among other things, methods for testing the identity, strength, quality and purity of the final biological 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.

BLA Submission and FDA Review

The results of preclinical studies and clinical trials, together with other detailed information, including extensive manufacturing information and information on the composition of the biologic, are submitted to the FDA in the form of a BLA requesting approval to market the biologic for one or more specified indications. The submission of a BLA requires payment of a substantial user fee unless a waiver is granted. Each BLA submitted to the FDA is reviewed for administrative completeness and reviewability within 60 days of the FDA's receipt of the application. If the BLA is found to be complete, the FDA will file the BLA, triggering a full substantive review of the application. The FDA may refuse to file any BLA that it deems incomplete or not properly reviewable at the time of submission.

Once a BLA has been accepted for filing, by law the FDA has 180 days to review the application and respond to the applicant. However, the review process is often significantly extended by FDA requests for

additional information or clarification. Under the Prescription Drug User Fee Act, the FDA has a goal of reviewing BLAs within ten months of the 60-day filing date for standard review or six months for priority review, but the overall timeframe is often extended by FDA requests for additional information or clarification. The FDA reviews a BLA to determine, among other things, whether the biological product is safe, pure and potent and whether the facility or facilities in which it is manufactured meet standards designed to assure the product's continued safety, purity and potency. The FDA may refer the application to an advisory committee for review, evaluation and recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations.

Before approving a BLA, the FDA will inspect the facility or the facilities at which the biologic product is manufactured, and will not license the product unless cGMP compliance is satisfactory. The FDA may also inspect the sites at which the clinical trials were conducted to assess their compliance with GCP requirements, and will not license the biologic unless compliance with such requirements is satisfactory.

The FDA may deny approval of a BLA if the applicable statutory and regulatory criteria are not satisfied, or it may require additional preclinical or clinical data. Even if such data are submitted, the FDA may ultimately decide that the BLA does not satisfy the criteria for approval. Data from clinical trials are not always conclusive and the FDA may interpret data differently than sponsors. Once the FDA approves a BLA, such approval defines the indicated uses for which the biologic may be marketed. The FDA may also require implementation of a Risk Evaluation and Mitigation Strategy, or REMS, which can include a medication guide, communication plan, or elements to assure safe use, such as restricted distribution methods, physician training, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling claims or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing regulatory standards is not maintained or if problems occur after the product reaches the market. The FDA may require one or more Phase 4 post-market studies and surveillance to further assess and monitor the product's safety and effectiveness after commercialization, and may limit further marketing based on the results of these post-marketing studies. After approval, certain changes to the approved biologic, such as adding new indications, manufacturing changes or additional labeling claims, are subject to further FDA review and approval. Depending on the nature of the change proposed, a BLA supplement must be filed and approved before the change may be implemented.

Expedited Development and Review Programs

The FDA maintains several programs intended to facilitate and expedite development and review of new drugs and biologics to address unmet medical needs in the treatment of serious or life-threatening diseases or conditions. These programs include Fast Track designation, Breakthrough Therapy designation, Priority Review designation and Accelerated Approval, and the purpose of these programs is to provide important new drugs to patients earlier than under standard FDA review procedures.

A new drug or biologic is eligible for fast track designation if it is intended to treat a serious or life-threatening disease or condition and demonstrates the potential to address unmet medical needs for such disease or condition. Fast Track designation provides increased opportunities for sponsor meetings with the FDA during preclinical and clinical development, in addition to the potential for rolling review once a marketing application is filed, meaning that the agency may review portions of the marketing application before the sponsor submits the complete application, as well as Priority Review, discussed below. In addition, a new drug or biologic may be eligible for breakthrough therapy designation if it is intended to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. Breakthrough Therapy designation provides all the features of Fast Track designation in addition to intensive guidance on an efficient drug development program beginning as early as Phase 1, and FDA organizational commitment to expedited development, including involvement of senior managers and experienced review staff in a cross-disciplinary review, where appropriate.

Any product submitted to the FDA for approval, including a product with Fast Track or Breakthrough Therapy designation, may also be eligible for additional FDA programs intended to expedite the review process, including Priority Review designation and accelerated approval. A product is eligible for Priority Review if it has the potential to provide a significant improvement in safety or effectiveness in the treatment, diagnosis or prevention of a serious disease or condition. Additionally, products are eligible for accelerated approval if they can be shown to have an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or an effect on a clinical endpoint that can be measured earlier than an effect on irreversible morbidity or mortality which is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. Accelerated approval is usually contingent on a sponsor's agreement to conduct additional post-approval studies to verify and describe the product's clinical benefit. In addition, unless otherwise informed by the FDA, the FDA currently requires, as a condition for accelerated approval, that all advertising and promotional materials that are intended for dissemination or publication within 120 days following marketing approval be submitted to the agency for review during the pre-approval review period, and that after 120 days following marketing approval, all advertising and promotional materials must be submitted at least 30 days prior to the intended time of initial dissemination or publication.

Fast Track designation, Breakthrough Therapy designation, Priority Review designation and Accelerated Approval do not change the standards for approval but may expedite the development or review process.

Post-Approval Requirements

Licensed biologics that are manufactured or distributed in the United States are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to recordkeeping, periodic reporting, product distribution, advertising and promotion and reporting of adverse experiences with the product. There is also a continuing, annual prescription drug product program user fee.

Any biologics manufactured or distributed by us or our contract manufactures pursuant to FDA approvals would be subject to continuing regulation by the FDA, including recordkeeping requirements and reporting of adverse experiences associated with the product. Manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with ongoing regulatory requirements, including cGMP, which impose certain procedural and documentation requirements upon us and our contract manufacturers. Failure to comply with statutory and regulatory requirements can subject a manufacturer to possible legal or regulatory action, such as warning letters, suspension of manufacturing, product seizures, injunctions, civil penalties or criminal prosecution.

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 revisions to the approved labeling to add new safety information, requirements for post-market studies or clinical trials to assess new safety risks, or imposition of distribution or other restrictions under a REMS. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical trials;
- refusal of the FDA to approve applications or supplements to approved applications, or suspension or revocation of product approvals;
- product seizure or detention, or refusal to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the post-approval marketing and promotion of biologics, including standards and regulations for direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities, and promotional activities involving the internet and social media. A company can make only those claims relating to safety and efficacy that are approved by the FDA. Physicians may prescribe legally available biologics for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, impose stringent restrictions on manufacturers' communications regarding off-label use. Failure to comply with these requirements can result in adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties.

Biosimilars and Regulatory Exclusivity

As part of the Patient Protection and Affordable Care Act enacted in 2010, as amended by the Health Care and Education Reconciliation Act of 2010, collectively the Affordable Care Act, the Biologics Price Competition and Innovation Act, or BPCIA established an abbreviated pathway for the approval of biosimilar and interchangeable biological products. The abbreviated regulatory pathway provides legal authority for the FDA to review and approve biosimilar biologics based on their similarity to an existing brand product, referred to as a reference product, including the possible designation of a biosimilar as interchangeable with a brand product. Under the BPCIA the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. Moreover, 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 drug products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing. The BPCIA is complex and continues to be interpreted and implemented by the FDA. As a result, its ultimate impact, implementation and meaning are subject to uncertainty. In addition, the period of exclusivity provided by the BPCIA only operates against third parties seeking approval via the abbreviated pathway, but would not prevent third parties from pursuing approval via the traditional approval pathway. In addition, foreign regulatory authorities may also provide for exclusivity periods for approved biological products. For example, biological products in the EU may be eligible for at least a ten-year period of exclusivity.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, which is a disease or condition that affects fewer than 200,000 individuals in the United States, or if it affects more than 200,000 individuals in the United States, there is no reasonable expectation that the cost of developing and making the product available in the United States for the disease or condition will be recovered from sales of the product. Orphan designation must be requested before submitting a BLA. Orphan designation does not convey any advantage in or shorten the duration of the regulatory review and approval process, though companies developing orphan products are eligible for certain incentives, including tax credits for qualified clinical testing and waiver of application fees.

If a product that has orphan designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to a seven-year period of marketing exclusivity during which the FDA may not approve any other applications to market the same therapeutic agent for the same indication, except in limited circumstances, such as a subsequent product's showing of clinical superiority over the product with orphan exclusivity or where the original applicant cannot produce sufficient quantities of product. Competitors, however, may receive approval of different therapeutic agents for the indication for which the orphan product has exclusivity or obtain approval for the same therapeutic agent for a different indication than that for which the orphan product has exclusivity. Orphan product exclusivity could block the approval of one of our products for seven years if a competitor obtains approval for the same therapeutic agent for the same indication before we do, unless we are able to demonstrate that our product is

clinically superior. Furthermore, if a designated orphan product receives marketing approval for an indication broader than the rare disease or condition for which it received orphan designation, it may not be entitled to orphan exclusivity.

Government Regulation Outside of the United States

To market any product outside of the United States, we would need to comply with numerous and varying regulatory requirements of other countries regarding safety and efficacy and governing, among other things, clinical trials, marketing authorization, manufacturing, commercial sales and distribution of our products. For instance, in the EEA (comprised of the 28 EU Member States plus Iceland, Liechtenstein and Norway) medicinal products must be authorized for marketing by using either the centralized authorization procedure or national authorization procedures.

Centralized procedure—Under the centralized procedure, following the opining of the EMA’s Committee for Medicinal Products for Human Use, or, CHMP, the European Commission issues a single marketing authorization valid across the EEA. The centralized procedure is compulsory for human medicines derived from biotechnology processes or advanced therapy medicinal products (such as gene therapy, somatic cell therapy and tissue engineered products), products that contain a new active substance indicated for the treatment of certain diseases, such as HIV/AIDS, cancer, neurodegenerative disorders, diabetes, autoimmune diseases and other immune dysfunctions, viral diseases, and officially designated orphan medicines. For medicines that do not fall within these categories, an applicant has the option of submitting an application for a centralized marketing authorization to the EMA, as long as the medicine concerned contains a new active substance not yet authorized in the EEA, is a significant therapeutic, scientific or technical innovation, or if its authorization would be in the interest of public health in the EEA. Under the centralized procedure the maximum timeframe for the evaluation of an MAA by the EMA is 210 days, excluding clock stops, when additional written or oral information is to be provided by the applicant in response to questions asked by the CHMP. Accelerated assessment might be granted by the CHMP in exceptional cases, when a medicinal product is expected to be of a major public health interest, particularly from the point of view of therapeutic innovation. The timeframe for the evaluation of an MAA under the accelerated assessment procedure is 150 days, excluding clock stops.

National authorization procedures—There are also two other possible routes to authorize medicinal products in several countries, which are available for products that fall outside the scope of the centralized procedure:

- *Decentralized procedure.* Using the decentralized procedure, an applicant may apply for simultaneous authorization in more than one EU country of medicinal products that have not yet been authorized in any EU country and that do not fall within the mandatory scope of the centralized procedure.
- *Mutual recognition procedure.* In the mutual recognition procedure, a medicine is first authorized in one EU Member State, in accordance with the national procedures of that country. Following this, additional marketing authorizations can be sought from other EU countries in a procedure whereby the countries concerned recognize the validity of the original, national marketing authorization.

In the EEA, new products authorized for marketing (i.e., reference products) qualify for eight years of data exclusivity and an additional two years of market exclusivity upon marketing authorization. The data exclusivity period prevents generic or biosimilar applicants from relying on the preclinical and clinical trial data contained in the dossier of the reference product when applying for a generic or biosimilar marketing authorization in the EU during a period of eight years from the date on which the reference product was first authorized in the EU. The market exclusivity period prevents a successful generic or biosimilar applicant from commercializing its product in the EU until ten years have elapsed from the initial authorization of the reference product in the EU. The ten-year market exclusivity period can be extended to a maximum of eleven years if, during the first eight years of those ten years, the marketing authorization holder obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to their authorization, are held to bring a significant clinical benefit in comparison with existing therapies.

The criteria for designating an “orphan medicinal product” in the EEA are similar in principle to those in the United States. In the EEA a medicinal product may be designated as orphan if (1) it is intended for the diagnosis, prevention or treatment of a life-threatening or chronically debilitating condition; (2) either (a) such condition affects no more than five in 10,000 persons in the EU when the application is made, or (b) the product, without the benefits derived from orphan status, would not generate sufficient return in the EU to justify investment; and (3) there exists no satisfactory method of diagnosis, prevention or treatment of such condition authorized for marketing in the EU, or if such a method exists, the product will be of significant benefit to those affected by the condition. Orphan medicinal products are eligible for financial incentives such as reduction of fees or fee waivers and are, upon grant of a marketing authorization, entitled to ten years of market exclusivity for the approved therapeutic indication. During this ten year orphan market exclusivity period, no marketing authorization application shall be accepted and no marketing authorization shall be granted for a similar medicinal product for the same indication. An orphan product can also obtain an additional two years of market exclusivity in the EU for pediatric studies. The ten year market exclusivity may be reduced to six years if, at the end of the fifth year, it is established that the product no longer meets the criteria for orphan designation, for example, if the product is sufficiently profitable not to justify maintenance of market exclusivity. Additionally, marketing authorization may be granted to a similar product for the same indication at any time if (i) the second applicant can establish that its product, although similar, is safer, more effective or otherwise clinically superior; (ii) the applicant consents to a second orphan medicinal product application; or (iii) the applicant cannot supply enough orphan medicinal product.

Similar to the United States, the various phases of non-clinical and clinical research in the European Union are subject to significant regulatory controls.

The Clinical Trials Directive 2001/20/EC, the Directive 2005/28/EC on Good Clinical Practice, or GCP, and the related national implementing provisions of the individual EU Member States govern the system for the approval of clinical trials in the European Union. Under this system, an applicant must obtain prior approval from the competent national authority of the EU Member States in which the clinical trial is to be conducted. Furthermore, the applicant may only start a clinical trial at a specific study site after the competent ethics committee has issued a favorable opinion. The clinical trial application must be accompanied by, among other documents, an investigational medicinal product dossier (the Common Technical Document) with supporting information prescribed by Directive 2001/20/EC, Directive 2005/28/EC, where relevant the implementing national provisions of the individual EU Member States and further detailed in applicable guidance documents.

In April 2014, the new Clinical Trials Regulation, (EU) No 536/2014 (Clinical Trials Regulation) was adopted. The Regulation is anticipated to come into application in 2019. The Clinical Trials Regulation will be directly applicable in all the EU Member States, repealing the current Clinical Trials Directive 2001/20/EC. Conduct of all clinical trials performed in the European Union will continue to be bound by currently applicable provisions until the new Clinical Trials Regulation becomes applicable. The extent to which ongoing clinical trials will be governed by the Clinical Trials Regulation will depend on when the Clinical Trials Regulation becomes applicable and on the duration of the individual clinical trial. If a clinical trial continues for more than three years from the day on which the Clinical Trials Regulation becomes applicable the Clinical Trials Regulation will at that time begin to apply to the clinical trial. The new Clinical Trials Regulation aims to simplify and streamline the approval of clinical trials in the European Union. The main characteristics of the regulation include: a streamlined application procedure via a single entry point, the “EU portal”; a single set of documents to be prepared and submitted for the application as well as simplified reporting procedures for clinical trial sponsors; and a harmonized procedure for the assessment of applications for clinical trials, which is divided in two parts. Part I is assessed by the competent authorities of all EU Member States in which an application for authorization of a clinical trial has been submitted (Member States concerned). Part II is assessed separately by each Member State concerned. Strict deadlines have been established for the assessment of clinical trial applications. The role of the relevant ethics committees in the assessment procedure will continue to be governed by the national law of the concerned EU Member State. However, overall related timelines will be defined by the Clinical Trials Regulation.

Coverage and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any product candidates for which we obtain regulatory approval. In the United States and markets in other countries, sales of any products for which we receive regulatory approval for commercial sale will depend, in part, on the extent to that third-party payors provide coverage, and establish adequate reimbursement levels for such products.

In the United States, third-party payors include federal and state healthcare programs, private managed care providers, health insurers and other organizations. The process for determining whether a third-party payor will provide coverage for a product may be separate from the process for setting the price of a product or for establishing the reimbursement rate that such a payor will pay for the product. Third-party payors may limit coverage to specific products on an approved list, also known as a formulary, which might not include all of the FDA-approved products for a particular indication. Third-party payors are increasingly challenging the price, examining the medical necessity and reviewing the cost-effectiveness of medical products, therapies and services, in addition to questioning their safety and efficacy. We may need to conduct expensive pharmaco-economic 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. A payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Furthermore, one payor's determination to provide coverage for a product does not assure that other payors will also provide coverage for the product. 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 product development.

Different pricing and reimbursement schemes exist in other countries. In the EU, governments influence the price of pharmaceutical products through their pricing and reimbursement rules and control of national health care systems that fund a large part of the cost of those products to consumers. Some jurisdictions operate positive and negative list systems under which products may only be marketed once a reimbursement price has been agreed. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost-effectiveness of a particular product candidate to currently available therapies. Other member states allow companies to fix their own prices for medicines, but monitor and control company profits. The downward pressure on health care costs has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross-border imports from low-priced markets exert a commercial pressure on pricing within a country.

The marketability of any product candidates for which we receive regulatory approval for commercial sale may suffer if the government and third-party payors fail to provide adequate coverage and reimbursement. In addition, emphasis on managed care in the United States has increased and we expect will continue to increase the pressure on healthcare pricing. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

Employees

As of February 25, 2018 we have 56 full-time employees, including 27 with M.D. or Ph.D. degrees. Of those full-time employees, 41 are engaged in research and development. None of our employees is represented by a labor union or covered by a collective bargaining agreement. We consider our relationship with our employees to be good.

Facilities

Our corporate headquarters are located in Cambridge, Massachusetts, where we currently lease 9,132 square feet of office and laboratory space that expires in June 2018. We also lease 6,437 square feet of office and

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laboratory space that expires in May 2020 and sublease 40,765 square feet of office and laboratory space that expires in September 2025, both in Cambridge, Massachusetts. We believe that our facilities are sufficient to meet the current needs of the company and that suitable space will be available as and when needed.

Legal Proceedings

We are not subject to any material legal proceedings.

MANAGEMENT

Executive Officers and Directors

The following table sets forth the name, age and position of each of our executive officers and directors as of December 31, 2017.

<u>Name</u>	<u>Age</u>	<u>Position</u>
<u>Executive Officers</u>		
Balkrishan (Simba) Gill, Ph.D.	53	President and Chief Executive Officer and Director
Mark Bodmer, Ph.D.	60	Chief Scientific Officer and President of Research and Development
Duncan McHale, M.D., Ph.D.	51	Chief Medical Officer
<u>Directors</u>		
Noubar B. Afeyan, Ph.D.	55	Chairman of the Board of Directors
Lord Ara Darzi	57	Director
David R. Epstein	56	Director
Theodose Melas-Kyriazi	58	Director
David P. Perry	50	Director

- (1) Member of the audit committee.
- (2) Member of the compensation committee.
- (3) Member of the nominating and corporate governance committee.

Executive Officers

Balkrishan (Simba) Gill, Ph.D. has served as our President, Chief Executive Officer and member of our board of directors since September 2015. Dr. Gill has also served on the board of directors of Realm Therapeutics PLC since 2016, and as a Venture Partner at Flagship Pioneering, a life sciences innovation enterprise, since 2015. From 2006 to 2015, Dr. Gill served as the President and Chief Executive Officer of moksha8 Pharmaceuticals, Inc., a pharmaceutical company. Dr. Gill received his Ph.D. from King's College, London and his M.B.A. from INSEAD. We believe Dr. Gill's knowledge and experience in the venture capital and pharmaceutical industries qualify him to serve on our board of directors.

Mark Bodmer, Ph.D. has served as our Chief Scientific Officer and President of Research and Development since April 2016. From April 2015 to April 2016, Dr. Bodmer served on the board of directors of BioIndustry Association, a biotechnology company. From January 2012 to April 2016, Dr. Bodmer served as the Vice President of New Medicines Therapeutics at UCB S.A., a biopharmaceutical company. Dr. Bodmer received his Ph.D. from Cambridge University.

Duncan McHale, M.D., Ph.D. has served as our Chief Medical Officer since February 2018. Dr. McHale has also served as director and Chief Executive Officer at Weatherden, Ltd., a clinical development firm, since April 2017, and as a director at Excite Ventures. From September 2011 to May 2017, Dr. McHale served as the Head of Global Exploratory Development at UCB S.A., a biopharmaceutical company. Dr. McHale received his M.B.B.S. from Newcastle University and his Ph.D. in clinical genetics from the University of Leeds.

Directors

Noubar B. Afeyan, Ph.D. is a co-founder and has served as chairman of our board of directors since May 2014. Dr. Afeyan has served as the Chief Executive Officer of Flagship Pioneering, a life sciences innovation

enterprise, since 1999. Dr. Afeyan has also served on the board of directors of Seres Therapeutics, Inc. since 2012. Dr. Afeyan has previously served on the board of directors of BG Medicine, Inc., Eleven Biotherapeutics, Inc. and BIND Therapeutics, Inc. He currently serves on several private biotechnology company boards including Moderna Therapeutics, Inc. and Rubius Therapeutics, Inc. Dr. Afeyan is a member of the corporation (board of trustees) of the Massachusetts Institute of Technology and a member of the board of overseers of the Boston Symphony Orchestra. Dr. Afeyan received his B.S. in Chemical Engineering from McGill University and his Ph.D. in Biochemical Engineering from the Massachusetts Institute of Technology. We believe that Dr. Afeyan is qualified to serve on our board of directors because of his extensive experience as an entrepreneur in the life sciences industry and his service on the boards of directors of other life sciences companies.

Professor the Lord Ara Darzi of Denham has served as a member of our board of directors since February 2018. Lord Darzi also currently serves on the board of directors of HQI Holdings Limited, Health Quality Improvement LLC, Ara Darzi Qatar Limited, SQI Limited and SPI Investments Limited. He also currently serves as the Vice Chair of the Board of Governors of Sidra Medical and Research Center, Qatar, a Council Member at the Engineering and Physical Sciences Research Council, the Executive Chair of the World Innovation Summit for Health, as the Chair of Surgery at Imperial College London and as Professor of Surgery at the Institute of Cancer Research. From 2013 to 2015, Lord Darzi served as the Vice-Dean of Health Policy and Engagement at the Imperial College of London. Lord Darzi received his Medical Degree from Trinity College. We believe Lord Darzi's extensive business experience in the biotechnology and healthcare industries qualifies him to serve on our board of directors.

David R. Epstein has served as a member of our board of directors since March 2017. Mr. Epstein also currently serves as an Executive Partner at Flagship Pioneering, a life sciences innovation enterprise, and as a director at International Flavors & Fragrances, Inc. From January 2010 to July 2016, Mr. Epstein served as Chief Executive Officer of Novartis Pharmaceuticals, a Division of Novartis AG, a pharmaceutical company. Mr. Epstein received his M.B.A. from Columbia University Graduate School of Business. We believe Mr. Epstein's extensive business experience in the biotechnology and biopharmaceutical industries qualifies him to serve on our board of directors.

Theodose Melas-Kyriazi has served as a member of our board of directors since February 2017. Mr. Melas-Kyriazi has also served as Chief Financial Officer of Levitronix Technologies LLC, a biotechnology company, since 2006. From 2003 to 2016, Mr. Melas-Kyriazi served as a director at Valeant Pharmaceuticals International, Inc. Mr. Melas-Kyriazi received his M.B.A. from Harvard Business School. We believe Mr. Melas-Kyriazi is able to make a valuable contribution to our board of directors due to his vast experience as a finance professional in the biomedical and pharmaceutical industries.

David P. Perry has served as a member of our board of directors since June 2016. Mr. Perry has also served as Chief Executive Officer, President and Director of Indigo Agriculture, Inc., a plant microbiome company, since January 2015. From March 2002 to March 2014, Mr. Perry served as a director and Chief Executive Officer of Anacor Pharmaceuticals, Inc., a pharmaceutical company. Mr. Perry received his M.B.A. from Harvard Business School. We believe Mr. Perry's extensive business experience in the biotechnology and biopharmaceutical industries qualifies him to serve on our board of directors.

Board Composition and Election of Directors

Director Independence

Our board of directors currently consists of six members. Our board of directors has determined that, of our six directors, each of _____, _____, _____, _____ and _____ is "independent" as that term is defined under the rules of The Nasdaq Stock Market LLC, or the Nasdaq rules. The rules' independence definition includes a series of objective tests, such as that the director is not, and has not been for at least three years, one of our employees and that neither the director nor any of his or her family members has engaged in various types of business dealings with us. In addition, as required by the Nasdaq rules, our board of directors has made a

subjective determination as to each independent director that no relationships exists that, 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 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.

Classified Board of Directors

In accordance with our restated certificate of incorporation that will go into effect upon the closing of this offering, our board of directors will be divided into three classes with staggered, three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Effective upon the closing of this offering, our directors will be divided among the three classes as follows:

- the Class I directors will be and , and their terms will expire at our first annual meeting of stockholders following this offering;
- the Class II directors will be and , and their terms will expire at our second annual meeting of stockholders following this offering; and
- the Class III directors will be and , and their terms will expire at the third annual meeting of stockholders following this offering.

Our restated certificate of incorporation that will go into effect upon the closing of this offering will provide that the authorized number of directors may be changed only by resolution of the board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control of our company. Our directors may be removed only for cause by the affirmative vote of the holders of at least two-thirds of our outstanding voting stock entitled to vote in the election of directors.

Board Leadership Structure

Our board of directors is currently chaired by Noubar Afeyan, Ph.D. Our corporate governance guidelines provide that, if the chairman of the board is a member of management or does not otherwise qualify as independent, the independent directors of the board may elect a lead director. currently serves as our lead director. The lead director's responsibilities include, but are not limited to: presiding over all meetings of the board of directors at which the chairman is not present, including any executive sessions of the independent directors; approving board meeting schedules and agendas; and acting as the liaison between the independent directors and the Chief Executive Officer and chairman of the board. Our corporate governance guidelines further provide the flexibility for our board of directors to modify our leadership structure in the future as it deems appropriate.

Role of the Board in Risk Oversight

One of the key functions of our board of directors is informed oversight of our risk management process. Our board of directors does not have a standing risk management committee, but rather administers this oversight function directly through our board of directors as a whole, as well as through various standing committees of our board of directors that address risks inherent in their respective areas of oversight. In particular, our board of directors is responsible for monitoring and assessing strategic risk exposure and our audit committee has the responsibility to consider and discuss our major financial risk exposures and the steps our management has taken to monitor and control these exposures, including guidelines and policies to govern the process by which risk

assessment and management is undertaken. Our audit committee also monitors compliance with legal and regulatory requirements. Our nominating and corporate governance committee monitors the effectiveness of our corporate governance practices, including whether they are successful in preventing illegal or improper liability-creating conduct. Our compensation committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking. While each committee is responsible for evaluating certain risks and overseeing the management of such risks, our entire board of directors is regularly informed through committee reports about such risks.

Board Committees

Our board of directors has established three standing committees—audit, compensation and nominating and corporate governance—each of which operates under a charter that has been approved by our board of directors. The composition and functioning of all of our committees will comply with all applicable requirements of the Sarbanes-Oxley Act of 2002, Nasdaq rules and SEC rules and regulations. Upon our listing on The Nasdaq Global Market, each committee’s charter will be available under the Corporate Governance section of our website at www.evelobio.com. The reference to our website address does not constitute incorporation by reference of the information contained at or available through our website, and you should not consider it to be a part of this prospectus.

Audit Committee

The audit committee’s responsibilities include:

- appointing, approving the compensation of, and assessing the independence of our registered public accounting firm;
- overseeing the work of our registered public accounting firm, including through the receipt and consideration of reports from such firm;
- reviewing and discussing with management and the registered public accounting firm our annual and quarterly financial statements and related disclosures;
- coordinating our board of directors’ oversight of our internal control over financial reporting, disclosure controls and procedures and code of business conduct and ethics;
- discussing our risk management policies;
- meeting independently with our internal auditing staff, if any, registered public accounting firm and management;
- reviewing and approving or ratifying any related person transactions; and
- preparing the audit committee report required by SEC rules.

The members of our audit committee are _____, _____ and _____. _____ serves as the chairperson of the committee. All members of our audit committee meet the requirements for financial literacy under the applicable Nasdaq rules. Our board of directors has determined that _____ and _____ meet the independence requirements of Rule 10A-3 under the Exchange Act and the applicable Nasdaq rules. Our board of directors has determined that _____ is an “audit committee financial expert” as defined by applicable SEC rules and has the requisite financial sophistication as defined under the applicable Nasdaq rules.

Compensation Committee

The compensation committee’s responsibilities include:

- reviewing and approving, or recommending for approval by the board of directors, the compensation of our Chief Executive Officer and our other executive officers;

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- overseeing and administering our cash and equity incentive plans;
- reviewing and making recommendations to our board of directors with respect to director compensation;
- reviewing and discussing annually with management our “Compensation Discussion and Analysis,” to the extent required;
- reviewing with management our major compensation-related risk exposures and the steps management has taken, or should consider taking, to monitor or mitigate such exposures; and
- preparing the annual compensation committee report required by SEC rules, to the extent required.

The members of our compensation committee are _____, _____ and _____. _____ serves as the chairperson of the committee. Our board of directors has determined that each of _____, _____ and _____ is independent under the applicable Nasdaq rules, including the Nasdaq rules specific to membership on the compensation committee, and is a “non-employee director” as defined in Rule 16b-3 promulgated under the Exchange Act.

Nominating and Corporate Governance Committee

The nominating and corporate governance committee’s responsibilities include:

- identifying individuals qualified to become board members;
- recommending to our board of directors the persons to be nominated for election as directors and to each board committee;
- developing and recommending to our board of directors corporate governance guidelines, and reviewing and recommending to our board of directors proposed changes to our corporate governance guidelines from time to time; and
- overseeing a periodic evaluation of our board of directors.

The members of our nominating and corporate governance committee are _____, _____ and _____. _____ serves as the chairperson of the committee. Our board of directors has determined that _____, _____ and _____ are independent under the applicable Nasdaq rules.

Compensation Committee Interlocks and Insider Participation

No member of our compensation committee is or has been our current or former officer or employee. None of our executive officers served as a director or a member of a compensation committee (or other committee serving an equivalent function) of any other entity, one of whose executive officers served as a director or member of our compensation committee during the fiscal year ended December 31, 2017.

Code of Ethics and Code of Conduct

We have adopted 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. Upon our listing on The Nasdaq Global Market, our code of business conduct and ethics will be available under the Corporate Governance section of our website at www.evelobio.com. In addition, we intend to post on our website all disclosures that are required by law or the Nasdaq rules concerning any amendments to, or waivers from, any provision of the code. The reference to our website address does not constitute incorporation by reference of the information contained at or available through our website, and you should not consider it to be a part of this prospectus.

EXECUTIVE AND DIRECTOR COMPENSATION

Executive Compensation

This section discusses the material components of the compensation program for our executive officers who are named in the 2017 Summary Compensation Table below. In 2017, our named executive officers and their positions were:

- Balkrishan (Simba) Gill, Ph.D., President, Chief Executive Officer and Director;
- Mark Bodmer, Ph.D., Chief Scientific Officer and President of Research and Development; and
- Duncan McHale, M.D., Ph.D., Chief Medical Officer.

This discussion may contain forward-looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs. Actual compensation programs that we adopt following the completion of this offering may differ materially from the currently planned programs summarized in this discussion.

2017 Summary Compensation Table

The following table sets forth information concerning the compensation of our named executive officers for the year ended December 31, 2017.

<u>Name and Principal Position</u>	<u>Year</u>	<u>Salary (\$)</u>	<u>Bonus (\$)</u>	<u>Option Awards \$(2)</u>	<u>Non-Equity Incentive Plan Compensation \$(3)</u>	<u>All Other Compensation (\$)</u>	<u>Total (\$)</u>
Balkrishan (Simba) Gill, Ph.D. <i>President, Chief Executive Officer and Director</i>	2017	437,500(4)	—	1,175,550	218,720	—	1,831,770
Mark Bodmer, Ph.D. <i>Chief Scientific Officer and President of Research and Development</i>	2017	355,000(5)	20,000	397,224	124,250	40,000(6)	936,474
Duncan McHale, M.D., Ph.D.(1) <i>Chief Medical Officer</i>	2017	12,656(1)	—	831,559	—	690(7)	844,905

(1) Dr. McHale became our employee in December 2017 and is a U.K. resident paid in pound sterling. The amounts reported for Dr. McHale and paid in pounds sterling were converted to U.S. dollars based on a spot exchange rate as of December 31, 2017 of 1.35 U.S. dollars to one pound sterling. Dr. McHale's annual base salary for 2017 was £225,000.

(2) Amounts reflect the full grant-date fair value of stock options granted during 2017 computed in accordance with ASC Topic 718, rather than the amounts paid to or realized by the named executive officer. We provide information regarding the assumptions used to calculate the value of the stock options in Note 11 to our audited consolidated financial statements included in this prospectus. For Dr. Bodmer, the amount reported also includes \$22,320, representing the incremental fair value, computed in accordance with ASC Topic 718 as of the modification date, of a modification made during 2017 to certain stock options held by Dr. Bodmer. For Dr. McHale, the amount shown includes stock options that were granted to him as compensation for performing services as our employee and under our supply of services agreement with Weatherden, Ltd. Refer to "—Narrative Disclosure to Summary Compensation Table—Equity Compensation" below for additional information.

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- (3) Amounts reported represent annual bonuses paid based upon the achievement of our corporate objectives for 2017. Refer to “—Narrative Disclosure to Summary Compensation Table—2017 Bonuses” below for additional information.
- (4) Annual salary was increased from \$400,000 to \$475,000, effective July 1, 2017.
- (5) Annual salary was increased from \$350,000 to \$360,000, effective July 1, 2017.
- (6) Amount shown represents \$35,600 in lease payments for a company-provided corporate apartment in the Cambridge, Massachusetts area and \$4,400 in company paid travel expenses. Refer to “—Named Executive Officer Employment Agreements” below for additional information.
- (7) Amount shown represents \$563 to pay for personal health insurance coverage and \$127 in Company contributions to a group personal pension scheme initiated by the Company in accordance with Dr. McHale’s employment agreement accrued for 2017. Refer to “—Narrative Disclosure to Summary Compensation Table—Other Elements of Compensation” below for additional information.

Narrative Disclosure to Summary Compensation Table

The primary elements of compensation for our named executive officers are base salary, annual performance bonuses and long-term equity-based compensation awards. The named executive officers also generally participate in employee benefit plans and programs that we offer to our other full-time employees on the same basis.

2017 Salaries

We pay our named executive officers a base salary to provide a fixed component of compensation reflecting the executive’s skill set, experience, role and responsibilities. Base salaries for our named executive officers have generally been set at levels deemed necessary to attract and retain the named executive officers and were originally established in each named executive officer’s employment agreement or offer letter. Drs. Gill and Bodmer each received annual base salary increases effective July 1, 2017. Dr. McHale became an employee in December 2017 and did not receive any base salary increase in 2017.

The following table shows the annual base salaries of our named executive officers before and after the 2017 increases:

Name	Annual Base Salary Before Increase	Annual Base Salary After Increase
Balkrishan (Simba) Gill, Ph.D.	\$ 400,000	\$ 475,000
Mark Bodmer, Ph.D.	\$ 350,000	\$ 360,000
Duncan McHale, M.D., Ph.D.	—	£ 225,000

Dr. McHale’s annual base salary was determined taking into account the expectation that he work approximately 75% of full time in performing services for the Company.

2017 Bonuses

We offer our named executive officers the opportunity to earn annual performance bonuses to compensate them for attaining short-term company and individual goals as approved by our board of directors. For 2017, performance bonuses were based on attaining corporate goals relating to the overall business, including the advancement of product candidates, sustaining a leadership position in the monoclonal microbial field, capitalization, and key employee retention and recruitment.

The 2017 target bonus amounts for our named executive officers, expressed as percentages of their respective annual base salaries, were 50% for Dr. Gill and 35% for Dr. Bodmer. Dr. McHale became an employee in December 2017 and was not eligible for a 2017 performance bonus. The actual cash bonuses earned by Drs. Gill and Bodmer for 2017 performance are set forth in the Summary Compensation Table in the column titled “Non-Equity Incentive Plan Compensation.”

Equity Compensation

We generally offer stock options to our named executive officers as the long-term incentive component of our compensation program. Stock options allow our employees to purchase shares of our common stock at a price equal to the fair market value on the date of grant, as determined by the board of directors. Our stock options generally vest over four years from the applicable grant date with 25% of the option vesting on the first anniversary of the grant date, and with the remainder of the shares vesting quarterly thereafter. From time to time, our board of directors has also constructed alternate vesting schedules as it determined were appropriate to motivate particular employees. Historically, our employee stock options have been intended to qualify as “incentive stock options” to the extent permitted under the Code, and may allow “early exercise” of the unvested portion in exchange for shares or restricted stock subject to the same vesting schedule as the underlying stock option.

The following table sets forth the stock option awards granted to our named executive officers in 2017:

Named Executive Officer	2017 Options Granted(#)
Balkrishan (Simba) Gill, Ph.D.	750,000
Mark Bodmer, Ph.D.	295,200
Duncan McHale, M.D., Ph.D.	504,167

These stock options were issued under the 2015 Plan with exercise prices equal to the fair market value of common stock on the date of grant, as determined by the board of directors. Dr. McHale received both a grant of an option to purchase 166,667 shares of our common stock for performing services under our supply of services agreement with Weatherden, Ltd. and a grant of an option to purchase 337,500 shares of common stock made in connection with his commencing employment. Refer to “—Outstanding Equity Awards at 2017 Fiscal Year End” for information regarding the vesting of the stock options issued to our named executive officers in 2017 and to “—Named Executive Officer Employment Agreements” below for additional information regarding Dr. McHale’s services under the supply of services agreement with Weatherden, Ltd.

In addition, in December 2017, our board of directors amended certain stock options that had been granted to Dr. Bodmer in 2015 and 2016 subject to performance-based vesting conditions to provide that the options would instead vest in two equal installments on December 15, 2020 and December 31, 2021, subject to Dr. Bodmer’s continued service through the vesting date.

Prior to consummating this offering, we intend to adopt the 2018 Plan to facilitate the grant of cash and equity incentive awards to directors, employees (including our named executive officers) and consultants of our company and to enable our company to obtain and retain services of these individuals, which we believe is essential to our long-term success. Refer to “Incentive Compensation Plans” below for additional information about the 2018 Plan.

Other Elements of Compensation

Retirement Plans

We maintain a 401(k) retirement savings plan for our employees, including our named executive officers, who satisfy certain eligibility requirements. Our named executive officers other than Dr. McHale are eligible to participate in the 401(k) plan on the same terms as our full-time employees generally. Currently, we do not match contributions made by participants in the 401(k) plan. Under the terms of his employment agreement, if Dr. McHale contributes an amount equal to at least 1% of his base salary annually to a group personal pension scheme initiated by the Company, the Company will contribute an additional amount to scheme equal to 1% of his base salary annually.

Employee Benefits and Perquisites

All of our full-time employees, including our named executive officers other than Dr. McHale, are eligible to participate in our health and welfare plans, including medical and dental benefits, medical and dependent care flexible spending accounts, commuter benefits, gym reimbursement, short-term and long-term disability insurance, and life insurance to the same extent as our other full-time employees generally, subject to the terms and eligibility requirements of those plans. Under the terms of his employment agreement, Dr. McHale receives additional payments of £10,000 per year in lieu of participating in the Company's employee welfare benefit programs. In addition, to assist with Dr. Bodmer's relocation to the Boston area, Dr. Bodmer's employment agreement entitles him to receive an allowance of \$5,000 per month for temporary living and travel costs for up to 24 months after his commencing employment, payment for the legal and administrative costs associated with submission of an O-1 visa application and up to \$10,000 reimbursement for tax advisory services in each of his first two years of employment.

Outstanding Equity Awards at 2017 Fiscal Year-End

The following table summarizes the number of shares of common stock underlying outstanding equity incentive plan awards for each named executive officer as of December 31, 2017.

Name	Vesting Start Date	Option Awards					Stock Awards	
		Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$)(2)
Balkrishan (Simba) Gill, Ph.D. (1)	03/23/2015	—	—	—	—	—	196,875(3)	—
	07/01/2015	1,002,837	618,736(4)	—	\$ 0.12	11/04/2025	—	—
	07/01/2016	760,937	1,674,063(4)	—	\$ 0.28	10/04/2026	—	—
	07/01/2017	—	750,000(4)	—	\$ 0.97	12/14/2027	—	—
Mark Bodmer Ph.D.	04/19/2016	—	—	—	—	—	468,750(2)	\$ 932,813
	—	—	—	—	—	—	150,000(5)	\$ 298,500
	07/01/2016	207,812	457,188(4)	—	\$ 0.28	10/04/2026	—	—
	—	—	95,000(6)	—	\$ 0.28	10/04/2026	—	—
Duncan McHale, M.D., Ph.D.	—	—	—	190,000(7)	\$ 0.28	10/04/2026	—	—
	—	—	295,200(8)	—	\$ 0.61	09/18/2027	—	—
	01/01/2017	—	166,667(4)	—	\$ 0.61	09/18/2027	—	—
	12/15/2017	—	337,500(4)	—	\$ 0.97	12/14/2027	—	—

- (1) All stock options held by Dr. Gill will become immediately vested upon a change in control of our company (as defined in the applicable stock option agreement). Dr. Gill's option with a vesting start date of July 1, 2015 permits early exercise of the unvested portion in exchange for restricted stock and was, therefore, fully exercisable as of December 31, 2017. The number of shares shown for this option as being exercisable and unexercisable represent, respectively, the numbers shares for which the option was vested and unvested as of December 31, 2017.
- (2) There was no public market for our common stock as of December 31, 2017. We have calculated the market value of unvested stock awards based on an estimated value per share of our common stock of \$1.99, which

incorporates the retrospective fair value assessment performed for accounting purposes in connection with this offering. Refer to “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies—Determination of the Fair Value of Common Stock” for additional information.

- (3) Represents shares of restricted stock obtained upon early exercise of an option. The shares vest over four years with 25% vesting on the first anniversary of the vesting start date indicated and the remainder vesting quarterly thereafter.
- (4) The option vests over four years with 25% of the option vesting on the first anniversary of the vesting start date indicated and the remainder vesting quarterly thereafter.
- (5) Represents shares of restricted stock obtained upon early exercise of an option. The shares vest in two equal installments on December 15, 2020 and December 31, 2021.
- (6) The option vests in two equal installments on December 15, 2020 and December 31, 2021.
- (7) The option vests monthly following attainment of a clinical trial milestone on or before December 31, 2019, with the first installment occurring on the first day of the first calendar month that occurs after attainment of the milestone and the final installment occurring July 1, 2020.
- (8) The option vests as to 20% of the underlying shares on July 1, 2018, as to 5% of the underlying shares upon the completion of each three full months of service between July 1, 2018 and July 1, 2019 and as to 7.5% of the underlying shares upon the completion of each three full months of service thereafter.

Named Executive Officer Employment Agreements

We have entered into agreements with each of our named executive officers that govern the terms and conditions of their employment with us. Certain key terms of these agreements are described below.

Balkrishan (Simba) Gill, Ph.D.

We entered into an offer letter with Dr. Gill effective June 25, 2015. The offer letter entitles Dr. Gill to receive an annual base salary of at least \$400,000, subject to increase from time to time by the Company and the opportunity to earn an annual bonus of up to 50% of his annual base salary.

If we terminate Dr. Gill’s employment other than for Cause, death, or Disability (as these capitalized terms are defined in his offer letter), he will be entitled to receive (a) payments equal to 12 months of his then-current base salary, payable in periodic installments over 12 months in accordance with the Company’s normal payroll practices, and (b) direct payment of or reimbursement for a portion of his COBRA premiums at the Company’s normal rate of contribution for employees for up to 12 months. If the employment termination occurs within 12 months following a Change of Control, as defined in his offer letter, in addition to the foregoing payments and benefits, Dr. Gill will also be entitled to accelerated vesting of all of the Company’s equity or equity-based awards that are subject to time vesting conditions. Dr. Gill’s right to receive severance payments and benefits is subject to his execution and non-revocation of a release of claims and his compliance with certain confidentiality obligations and restrictive covenants.

Mark Bodmer, Ph.D.

We entered into an offer letter with Dr. Bodmer effective October 6, 2015. The offer letter entitles Dr. Bodmer to receive an annual base salary of at least \$350,000, subject to increase from time to time by the Company, and the opportunity to earn an annual performance-based bonus with a minimum target amount of 35% of his annual base salary. Dr. Bodmer is not entitled to any payments or benefits upon a termination of employment other than as required by law.

Duncan McHale, M.D., Ph.D.

We entered into an employment agreement with Dr. McHale effective December 15, 2017. The agreement entitles Dr. McHale to receive an annual base salary of at least £225,000, subject to increase from time to time by

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the Company, and the opportunity to earn an annual performance-based bonus. The agreement further entitles Dr. McHale to the payments described in “—Narrative Disclosure to Summary Compensation Table—Other Elements of Compensation” above. Under the terms of his employment agreement, Dr. McHale is expected to work a minimum of 75% of full time in performing services for the Company but may be required to work additional hours, without additional pay, in order to properly perform his duties. Both the Company and Dr. McHale are required to provide three months prior notice of termination to the other, provided that the Company may elect in lieu of providing notice to pay Dr. McHale the salary he would have earned during the notice period and may terminate Dr. McHale’s employment immediately upon the occurrence of certain specified events or conditions.

Prior to becoming our employee in December 2017, Dr. McHale provided services to us under the supply of services agreement with Weatherden, Ltd. described under “Certain Relationships and Related Person Transactions—Weatherden, Ltd. Agreement” below. The compensation payable to Dr. McHale for his services under this agreement was determined and paid by Weatherden, Ltd. For 2017 and all prior periods, no amount payable by us under the agreement was separately allocated to Dr. McHale’s services. In addition, in September 2017, we issued Dr. McHale an option to purchase 166,667 shares of our common stock as compensation for his performing services to us under the supply services agreement. Refer to “—Outstanding Equity Awards at 2017 Fiscal Year End” for additional information regarding this stock option award.

Director Compensation

Directors who are also our employees do not receive additional compensation for their service as directors. Certain of our non-employee directors have historically received awards of our stock options as compensation for their service as directors.

We intend to approve and implement a new compensation program for our directors that will become effective on the effectiveness of the registration statement of which this prospectus is a part. The terms of this program are not yet known and will be described in this prospectus once finalized.

2017 Director Compensation Table

The following table sets forth in summary form information concerning the compensation that was earned by or paid to each of our non-employee directors during the year that ended December 31, 2017:

Name	Option Awards \$(1)	Total (\$)
Noubar B. Afeyan, Ph.D.	—	—
David A. Berry, M.D., Ph.D.	—	—
David R. Epstein	\$219,800	\$ 219,800
Theodose Melas-Kyriazi	\$125,994	\$ 125,994
David P. Perry	\$230,403	\$ 230,403
Mark Pruzanski(2)	—	—

(1) Amounts reflect the full grant-date fair value of stock options granted during 2017 computed in accordance with ASC Topic 718, rather than the amounts paid to or realized by the named individual. We provide information regarding the assumptions used to calculate the value of the stock options in Note 11 to our audited consolidated financial statements included in this prospectus.

(2) Mark Pruzanski resigned from our board of directors in January 2017.

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The table below shows the aggregate numbers of option awards (exercisable and unexercisable) and unvested stock awards held as of December 31, 2017 by each non-employee director who was serving as of December 31, 2017.

Name	Options Outstanding at Fiscal Year End (#)
Noubar B. Afeyan, Ph.D.	—
David A. Berry, M.D., Ph.D.	—
David R. Epstein	400,000
Theodose Melas-Kyriazi	230,000
David P. Perry	146,000

Incentive Compensation Plans

The following summarizes the material terms of the long-term incentive compensation plan in which our named executive officers will be eligible to participate following the consummation of this offering and the 2015 Plan, under which we have previously made periodic grants of equity and equity-based awards to our named executive officers and other key employees.

2015 Stock Incentive Plan

Our board of directors and stockholders have approved the 2015 Plan, under which we may grant stock options, stock appreciation rights, restricted stock, restricted stock units and other stock-based awards to employees, directors and consultants of our company. A total of 20,702,933 shares of our common stock have been authorized for issuance under the 2015 Plan.

Following the effectiveness of the 2018 Plan, we will not make any further grants under the 2015 Plan. However, the 2015 Plan will continue to govern the terms and conditions of the outstanding awards granted under it. We anticipate that shares of our common stock subject to awards granted under the 2015 Plan that are forfeited, lapse unexercised or are settled in cash and which following the effective date of the 2015 Plan are not issued under the 2015 Plan will be available for issuance under the 2018 Plan.

Administration

Our board of directors administers the 2015 Plan and has the authority to: (i) grant awards; (ii) adopt, amend and repeal administrative rules, guidelines and practices relating to the 2015 Plan; (iii) construe and interpret the 2015 Plan and any award agreements thereunder; and (iv) correct any defect, supply any omission or reconcile any inconsistency in the 2015 Plan or any award. The board of directors may delegate its authority under the 2015 Plan to one or more committees or subcommittees.

Types of Awards; Eligibility

The 2015 Plan provides for the grant of stock options, stock appreciation rights, restricted stock, restricted stock units and other stock-based awards to employees, officers, directors and consultants of our company and its qualifying parents and subsidiaries. Currently, only stock options and awards of restricted stock are outstanding under the 2015 Plan.

Certain Transactions

If certain changes are made in, or events occur with respect to, our common stock, the 2015 Plan and outstanding awards will be appropriately adjusted in the class, number and, as applicable, exercise price of securities as determined by the board of directors. In the event of certain corporate transactions of our company,

including a merger, consolidation, sale of our common stock, or our liquidation or dissolution, our board of directors may take the following actions as to options outstanding under the 2015 Plan: (i) provide that such awards will be assumed or substantially equivalent awards substituted, (ii) upon written notice to participants, provide that unexercised awards will terminate unless exercised, (iii) provide that outstanding awards will become exercisable, (iv) if the transaction involves cash payments in exchange for the sale of our common stock, terminate awards for a cash payment equal to the excess of the transaction price of the underlying shares over the exercise price of the applicable award, (v) provide that, in connection with our liquidation or dissolution, awards will convert into a right to receive liquidation proceeds and (vi) any combination of the foregoing.

Amendment and Termination

The board of directors may amend outstanding awards under the 2015 Plan, including by reducing the exercise price per share of the award, without participant consent and may amend, suspend or terminate the 2015 Plan; provided in each case, that any amendment, suspension or termination does not materially or adversely affect the rights of participants holding outstanding awards under the 2015 Plan. Any modification or amendment that requires stockholder approval under applicable law or, with respect to incentive stock options, or ISOs, Section 422 of the Code may not be effected without approval by the company's stockholders.

2018 Incentive Award Plan

Effective the day prior to the first public trading date of our common stock, we intend to adopt and ask our stockholders to approve the 2018 Plan under which we may grant cash and equity-based incentive awards to eligible service providers in order to attract, retain and motivate the persons who make important contributions to our company. The material terms of the 2018 Plan are summarized below.

Eligibility and Administration

Our employees, consultants and directors, and employees and consultants of our subsidiaries, will be eligible to receive awards under the 2018 Plan. The 2018 Plan will be administered by our board of directors, which may delegate its duties and responsibilities to one or more committees of our directors and/or officers (referred to collectively as the plan administrator below), subject to the limitations imposed under the 2018 Plan, Section 16 of the Exchange Act, stock exchange rules and other applicable laws. The plan administrator will have the authority to take all actions and make all determinations under the 2018 Plan, to interpret the 2018 Plan and award agreements and to adopt, amend and repeal rules for the administration of the 2018 Plan as it deems advisable. The plan administrator will also have the authority to determine which eligible service providers receive awards, grant awards and set the terms and conditions of all awards under the 2018 Plan, including any vesting and vesting acceleration provisions, subject to the conditions and limitations in the 2018 Plan.

Shares Available for Awards

An aggregate of _____ shares of our common stock will initially be available for issuance under the 2018 Plan. The number of shares initially available for issuance will be increased by an annual increase on January 1 of each calendar year beginning in 2019 and ending in and including 2028, equal to the lesser of (A) _____ % of the shares of common stock outstanding on the final day of the immediately preceding calendar year and (B) a smaller number of shares determined by our board of directors. No more than _____ shares of common stock may be issued under the 2018 Plan upon the exercise of incentive stock options. The foregoing numbers are subject to adjustment in certain events, as described below. Shares issued under the 2018 Plan may be authorized but unissued shares, shares purchased on the open market or treasury shares.

If an award under the 2018 Plan or the 2015 Plan expires, lapses or is terminated, exchanged for cash, surrendered, repurchased, canceled without having been fully exercised or forfeited, any unused shares subject to the award will, as applicable, become or again be available for new grants under the 2018 Plan. Awards granted

under the 2018 Plan in substitution for any options or other stock or stock-based awards granted by an entity before the entity's merger or consolidation with us or our acquisition of the entity's property or stock will not reduce the shares available for grant under the 2018 Plan, but will count against the maximum number of shares that may be issued upon the exercise of incentive stock options.

In addition, the maximum aggregate grant date fair value as determined in accordance with FASB ASC Topic 718 (or any successor thereto), of awards granted to any non-employee director for services as a director pursuant to the 2018 Plan during any fiscal year may not exceed \$ (or, in the fiscal year of any director's initial service, \$). The plan administrator may, however, make exceptions to such limit on director compensation in extraordinary circumstances, subject to the limitations in the 2018 Plan.

Awards

The 2018 Plan provides for the grant of stock options, including incentive stock options, or ISOs, and nonqualified stock options, or NSOs, stock appreciation rights, or SARs, restricted stock, dividend equivalents, restricted stock units, or RSUs, and other stock or cash based awards. Certain awards under the 2018 Plan may constitute or provide for payment of "nonqualified deferred compensation" under Section 409A of the Code. All awards under the 2018 Plan will be set forth in award agreements, which will detail the terms and conditions of awards, including any applicable vesting and payment terms and post-termination exercise limitations. A brief description of each award type follows.

- *Stock Options and SARs.* Stock options provide for the purchase of shares of our common stock in the future at an exercise price set on the grant date. ISOs, by contrast to NSOs, may provide tax deferral beyond exercise and favorable capital gains tax treatment to their holders if certain holding period and other requirements of the Code are satisfied. SARs entitle their holder, upon exercise, to receive from us an amount equal to the appreciation of the shares subject to the award between the grant date and the exercise date. The plan administrator will determine the number of shares covered by each option and SAR, the exercise price of each option and SAR and the conditions and limitations applicable to the exercise of each option and SAR. The exercise price of a stock option or SAR will not be less than 100% of the fair market value of the underlying share on the grant date (or 110% in the case of ISOs granted to certain significant stockholders), except with respect to certain substitute awards granted in connection with a corporate transaction. The term of a stock option or SAR may not be longer than ten years (or five years in the case of ISOs granted to certain significant stockholders).
- *Restricted Stock and RSUs.* Restricted stock is an award of nontransferable shares of our common stock that remain forfeitable unless and until specified conditions are met and which may be subject to a purchase price. RSUs are contractual promises to deliver shares of our common stock in the future, which may also remain forfeitable unless and until specified conditions are met and may be accompanied by the right to receive the equivalent value of dividends paid on shares of our common stock prior to the delivery of the underlying shares. The plan administrator may provide that the delivery of the shares underlying RSUs will be deferred on a mandatory basis or at the election of the participant. The terms and conditions applicable to restricted stock and RSUs will be determined by the plan administrator, subject to the conditions and limitations contained in the 2018 Plan.
- *Other Stock or Cash Based Awards.* Other stock or cash based awards are awards of cash, fully vested shares of our common stock and other awards valued wholly or partially by referring to, or otherwise based on, shares of our common stock or other property. Other stock or cash based awards may be granted to participants and may also be available as a payment form in the settlement of other awards, as standalone payments and as payment in lieu of compensation to which a participant is otherwise entitled. The plan administrator will determine the terms and conditions of other stock or cash based awards, which may include any purchase price, performance goal, transfer restrictions and vesting conditions.

Performance Criteria

The plan administrator may select performance criteria for an award to establish performance goals for a performance period. Performance criteria under the 2018 Plan may include, but are not limited to, the following: net earnings or losses (either before or after one or more of interest, taxes, depreciation, amortization, and non-cash equity-based compensation expense); gross or net sales or revenue or sales or revenue growth; net income (either before or after taxes) or adjusted net income; profits (including but not limited to gross profits, net profits, profit growth, net operation profit or economic profit), profit return ratios or operating margin; budget or operating earnings (either before or after taxes or before or after allocation of corporate overhead and bonus); cash flow (including operating cash flow and free cash flow or cash flow return on capital); return on assets; return on capital or invested capital; cost of capital; return on stockholders' equity; total stockholder return; return on sales; costs, reductions in costs and cost control measures; expenses; working capital; earnings or loss per share; adjusted earnings or loss per share; price per share or dividends per share (or appreciation in or maintenance of such price or dividends); regulatory achievements or compliance; implementation, completion or attainment of objectives relating to research, development, regulatory, commercial, or strategic milestones or developments; market share; economic value or economic value added models; division, group or corporate financial goals; customer satisfaction/growth; customer service; employee satisfaction; recruitment and maintenance of personnel; human resources management; supervision of litigation and other legal matters; strategic partnerships and transactions; financial ratios (including those measuring liquidity, activity, profitability or leverage); debt levels or reductions; sales-related goals; financing and other capital raising transactions; cash on hand; acquisition activity; investment sourcing activity; and marketing initiatives, any of which may be measured in absolute terms or as compared to any incremental increase or decrease. Such performance goals also may be based solely by reference to the company's performance or the performance of a subsidiary, division, business segment or business unit of the company or a subsidiary, or based upon performance relative to performance of other companies or upon comparisons of any of the indicators of performance relative to performance of other companies. When determining performance goals, the plan administrator may provide for exclusion of the impact of an event or occurrence which the plan administrator determines should appropriately be excluded, including, without limitation, non-recurring charges or events, acquisitions or divestitures, changes in the corporate or capital structure, events unrelated to the business or outside of the control of management, foreign exchange considerations, and legal, regulatory, tax or accounting changes.

Certain Transactions

In connection with certain corporate transactions and events affecting our common stock, including a change in control, or change in any applicable laws or accounting principles, the plan administrator has broad discretion to take action under the 2018 Plan to prevent the dilution or enlargement of intended benefits, facilitate the transaction or event or give effect to the change in applicable laws or accounting principles. This includes canceling awards for cash or property, accelerating the vesting of awards, providing for the assumption or substitution of awards by a successor entity, adjusting the number and type of shares subject to outstanding awards and/or with respect to which awards may be granted under the 2018 Plan and replacing or terminating awards under the 2018 Plan. In addition, in the event of certain non-reciprocal transactions with our stockholders, the plan administrator will make equitable adjustments to the 2018 Plan and outstanding awards as it deems appropriate to reflect the transaction.

Plan Amendment and Termination

Our board of directors may amend or terminate the 2018 Plan at any time; however, no amendment, other than an amendment that increases the number of shares available under the 2018 Plan, may materially and adversely affect an award outstanding under the 2018 Plan without the consent of the affected participant and stockholder approval will be obtained for any amendment to the extent necessary to comply with applicable laws. Further, the plan administrator cannot, without the approval of our stockholders, amend any outstanding stock option or SAR to reduce its price per share. The 2018 Plan will remain in effect until the tenth anniversary of its effective date, unless earlier terminated by our board of directors. No awards may be granted under the 2018 Plan after its termination.

Foreign Participants, Claw-Back Provisions, Transferability and Participant Payments

The plan administrator may modify awards granted to participants who are foreign nationals or employed outside the United States or establish sub-plans or procedures to address differences in laws, rules, regulations or customs of such foreign jurisdictions. All awards will be subject to any company claw-back policy as set forth in such claw-back policy, the 2018 Plan or the applicable award agreement. Except as the plan administrator may determine or provide in an award agreement, awards under the 2018 Plan are generally non-transferable, except by will or the laws of descent and distribution, or, subject to the plan administrator's consent, pursuant to a domestic relations order, and are generally exercisable only by the participant. With regard to tax withholding obligations arising in connection with awards under the 2018 Plan, and exercise price obligations arising in connection with the exercise of stock options under the 2018 Plan, the plan administrator may, in its discretion, accept cash, wire transfer or check, shares of our common stock that meet specified conditions, a promissory note, a "market sell order," such other consideration as the plan administrator deems suitable or any combination of the foregoing.

2018 Employee Stock Purchase Plan

Effective the day prior to the first public trading date of our common stock, we intend to adopt and ask our stockholders to approve the 2018 Employee Stock Purchase Plan, or the 2018 ESPP. The material terms of the 2018 ESPP are summarized below.

Shares Available for Awards; Administration

A total of _____ shares of our common stock will initially be reserved for issuance under the 2018 ESPP. In addition, the number of shares available for issuance under the 2018 ESPP will be annually increased on January 1 of each calendar year beginning in 2019 and ending in and including 2028, by an amount equal to the lesser of (A) _____ % of the shares outstanding on the final day of the immediately preceding calendar year and (B) such smaller number of shares as is determined by our board of directors, provided that no more than _____ shares of our common stock may be issued under the 2018 ESPP. The foregoing numbers are subject to adjustment in certain events, as described below. Our board of directors or a committee of our board of directors will have authority to interpret the terms of the 2018 ESPP and determine eligibility of participants. We expect that the compensation committee will be the initial administrator of the 2018 ESPP.

Eligibility

Our employees are eligible to participate in the 2018 ESPP if they are customarily employed by us or a participating subsidiary for more than twenty hours per week and more than five months in any calendar year. However, an employee may not be granted rights to purchase stock under our 2018 ESPP if the employee, immediately after the grant, would own (directly or through attribution) stock possessing 5% or more of the total combined voting power or value of all classes of our stock.

Grant of Rights

The 2018 ESPP is intended to qualify under Section 423 of the Code and stock will be offered under the 2018 ESPP during offering periods. The length of the offering periods under the 2018 ESPP will be determined by the plan administrator and may be up to twenty-seven months long. Employee payroll deductions will be used to purchase shares on each purchase date during an offering period. The purchase dates for each offering period will be the final trading day in the offering period. Offering periods under the 2018 ESPP will commence when determined by the plan administrator. The plan administrator may, in its discretion, modify the terms of future offering periods.

The 2018 ESPP permits participants to purchase common stock through payroll deductions of up to _____ % of their eligible compensation, which includes a participant's gross base compensation for services to us, including

overtime payments and excluding sales commissions, incentive compensation, bonuses, expense reimbursements, fringe benefits and other special payments. The plan administrator will establish a maximum number of shares that may be purchased by a participant during any offering period, which, in the absence of a contrary designation, will be _____ shares. In addition, no employee will be permitted to accrue the right to purchase stock under the 2018 ESPP at a rate in excess of \$25,000 worth of shares during any calendar year during which such a purchase right is outstanding (based on the fair market value per share of our common stock as of the first day of the offering period).

On the first trading day of each offering period, each participant will automatically be granted an option to purchase shares of our common stock. The option will expire at the end of the applicable offering period, and will be exercised at that time to the extent of the payroll deductions accumulated during the offering period. The purchase price of the shares, in the absence of a contrary designation, will be _____ % of the lower of the fair market value of our common stock on the first trading day of the offering period or on the purchase date. Participants may voluntarily end their participation in the 2018 ESPP at any time at least one week prior to the end of the applicable offering period, and will be paid their accrued payroll deductions that have not yet been used to purchase shares of common stock. Participation ends automatically upon a participant's termination of employment.

A participant may not transfer rights granted under the 2018 ESPP other than by will or the laws of descent and distribution.

Certain Transactions

In the event of certain non-reciprocal transactions or events affecting our common stock known as "equity restructurings," the plan administrator will make equitable adjustments to the 2018 ESPP and outstanding rights. In the event of certain unusual or non-recurring events or transactions, including a change in control, the plan administrator may provide for (1) either the replacement of outstanding rights with other rights or property or termination of outstanding rights in exchange for cash, (2) the assumption or substitution of outstanding rights by the successor or survivor corporation or parent or subsidiary thereof, if any, (3) the adjustment in the number and type of shares of stock subject to outstanding rights, (4) the use of participants' accumulated payroll deductions to purchase stock on a new purchase date prior to the next scheduled purchase date and termination of any rights under ongoing offering periods or (5) the termination of all outstanding rights.

Plan Amendment

The plan administrator may amend, suspend or terminate the 2018 ESPP at any time. However, stockholder approval will be obtained for any amendment that increases the aggregate number or changes the type of shares that may be sold pursuant to rights under the 2018 ESPP, changes the corporations or classes of corporations whose employees are eligible to participate in the 2018 ESPP or changes the 2018 ESPP in any manner that would cause the 2018 ESPP to no longer be an employee stock purchase plan within the meaning of Section 423(b) of the Code.

CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

The following is a summary of each transaction or series of transactions since January 1, 2015, or any currently proposed transaction, to which we have been a party or are a party in which the amount involved exceeded or will exceed \$120,000, and in which any of our directors, executive officers or, to our knowledge, beneficial owners of more than 5% of our capital stock or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than equity and other compensation, termination, change in control and other arrangements, which are described under “Executive and Director Compensation.” We also describe below certain other transactions with our directors, executive officers and stockholders.

Preferred Stock financings and Convertible Note Financing

Convertible Note. On February 19, 2015, we issued a convertible promissory note to Flagship Ventures Fund V, L.P. in the principal amount of \$1.0 million.

Series A Preferred Stock Financing. From June 29, 2015 to January 29, 2016, we issued and sold to investors in private placements an aggregate of 13,370,279 shares of our Series A preferred stock at a purchase price of \$0.60 per share, for aggregate consideration of approximately \$8.0 million, consisting of \$7.0 million in cash proceeds plus the conversion of our promissory note in the principal amount of \$1.0 million plus \$22,167 in accrued interest.

Series A-1 Preferred Stock Financing. On June 16, 2016, we issued and sold to investors in a private placement an aggregate of 10,102,055 shares of our Series A-1 preferred stock at a purchase price of \$0.60 per share, for aggregate consideration of approximately \$6.1 million.

Series A-2 Preferred Stock Financing. From June 13, 2016 to December 8, 2016, we issued and sold to investors in private placements an aggregate of 5,833,334 shares of our Series A-2 preferred stock at a purchase price of \$1.20 per share, for aggregate consideration of approximately \$7.0 million.

Series A-3 Preferred Stock Financing. On June 16, 2016, we issued and sold to investors in a private placement an aggregate of 8,749,650 shares of our Series A-3 preferred stock at a purchase price of \$1.20 per share, for aggregate consideration of approximately \$10.5 million.

Series B Preferred Stock Financing. From January 5, 2017 to January 30, 2018, we issued and sold to investors in private placements an aggregate of 28,027,778 shares of our Series B preferred stock at a purchase price of \$1.80 per share, for aggregate consideration of approximately \$50.7 million.

Series C Preferred Stock Financing. On February 9, 2018, we issued and sold to investors in private placements an aggregate of 14,705,884 shares of our Series C preferred stock at a purchase price of \$3.23 per share, for aggregate consideration of approximately \$47.5 million.

The following table sets forth the aggregate number of shares of our capital stock acquired by beneficial owners of more than 5% of our capital stock in the financing transactions described above. Each share of each of our Series A preferred stock, Series A-1 preferred stock, Series A-2 preferred stock, Series A-3 preferred stock, Series B preferred stock and Series C preferred stock identified in the following table will convert into one share of common stock immediately prior to the closing of this offering.

Participants 5% or Greater Stockholders(1)	Series A Preferred Stock	Series A-1 Preferred Stock	Series A-2 Preferred Stock	Series A-3 Preferred Stock	Series B Preferred Stock	Series C Preferred Stock
Entities affiliated with Flagship Pioneering	12,536,945	10,102,055	5,416,667	8,333,000	18,611,110	2,321,982

- (1) Additional details regarding these stockholders and their equity holdings are provided in this prospectus under the caption “Principal Stockholders.”

One of our directors is associated with our principal stockholders as indicated in the table below:

	<u>Director</u>	<u>Principal Stockholder</u>
Noubar B. Afeyan, Ph.D.		Entities affiliated with Flagship Pioneering

Investors’ Rights Agreement

We entered into a fourth amended and restated investors’ rights agreement in February 2018 with the holders of our preferred stock, including entities with which certain of our directors are affiliated. The agreement provides for certain rights relating to the registration of such holders’ common stock, including shares issuable upon conversion of preferred stock, and a right of first refusal to purchase future securities sold by us. See “Description of Capital Stock—Registration Rights” for additional information. Certain provisions of our investors rights agreement will terminate upon the closing of this offering.

Voting Agreement

We entered into a fourth amended and restated voting agreement in February 2018, by and among us and certain of our stockholders, pursuant to which certain directors were elected to serve as members on our board of directors and, as of the date of this prospectus, the directors so serving are: Noubar B. Afeyan, Ph.D., M.D., Ph.D., Professor the Lord Ara Darzi, David R. Epstein, Balkrishan (Simba) Gill, Ph.D., Theodore Melas-Kyriazi and David P. Perry. Pursuant to the voting agreement, Dr. Gill was initially selected to serve on our board of directors in his capacity as our Chief Executive Officer. Dr. Afeyan was initially selected to serve on our board of directors as a representative of holders of our preferred stock, as designated by Flagship Ventures Fund V, L.P., Flagship V VentureLabs Rx Fund, L.P., Nutritional Health Side Fund, L.P., Flagship Ventures Fund IV, L.P., Flagship Ventures Fund IV-Rx, L.P., Nutritional Health Disruptive Innovation Fund, L.P. and Flagship Ventures Opportunities Fund I, L.P. Lord Darzi and Messrs. Epstein, Melas-Kyriazi and Perry were selected to serve on our board of directors as independent directors, as designated by a majority of the voting power of the outstanding shares of preferred stock, voting together as a single class.

The above provision of the voting agreement will terminate upon the closing of this offering, and members previously elected to our board of directors pursuant to this agreement will continue to serve as directors until they resign, are removed or their successors are duly elected by the holders of our common stock. The composition of our board of directors after this offering is described in more detail under “Management—Board Composition and Election of Directors.”

Employment Agreements

We plan to enter into employment agreements with our named executive officers. For more information regarding the agreements with our named executive officers, see “Executive and Director Compensation— Executive Officer Employment Agreements.”

Indemnification Agreements

We intend to enter into indemnification agreements with each of our directors and executive officers. These agreements, among other things, may require us to indemnify each director (and in certain cases their related venture capital funds) and executive officer to the fullest extent permitted by Delaware law, including indemnification of expenses such as attorneys’ fees, judgments, fines and settlement amounts incurred by the

director or executive officer in any action or proceeding, including any action or proceeding by or in right of us, arising out of the person's services as a director or executive officer. For further information, see "Executive and Director Compensation—Limitations of Liability and Indemnification."

Stock Option Grants to Executive Officers and Directors

We have granted stock options to our executive officers and certain of our directors as more fully described in the section entitled "Executive and Director Compensation."

Flagship Services Agreement

In May 2014, we entered into a services agreement with Flagship Ventures Management, Inc., an affiliate of certain beneficial owners of more than 5% of our capital stock, to provide general and administrative services, including employee health and dental benefit plan administration and consulting services. We made payments under the agreement of \$7,946, \$208,575 and \$549,664 during the years ended December 31, 2017, 2016 and 2015 respectively.

Epiva Acquisition

On June 16, 2016, we acquired Epiva, a privately held research company, resulting in the exchange of all shares of Epiva stock for shares of our stock at an exchange rate of 1-for-0.8333. In connection with the acquisition, we issued shares of our stock to certain beneficial owners of more than 5% of our capital stock, including entities affiliated with certain of our directors. For further information, see "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Weatherden, Ltd. Agreement

In January 2017, we entered into a supply of services agreement with Weatherden, Ltd. for clinical advisory services, or the Weatherden agreement. In July 2017, we entered into an amendment to the Weatherden agreement to provide for additional initial clinical operations support. Weatherden, Ltd. is an affiliate of Dr. Duncan McHale, one of our executive officers. We made payments under the agreement of \$304,863 during the year ended December 31, 2017. As of December 31, 2017, the amount due to Weatherden, Ltd. under the agreement was \$160,650.

Policies and Procedures for Related Person Transactions

Our board of directors has adopted a written related person transaction policy, to be effective upon the closing of this offering, setting forth the policies and procedures for the review and approval or ratification of related person transactions. This policy will cover, with certain exceptions set forth in Item 404 of Regulation S-K under the Securities Act, any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we were or are to be a participant, where the amount involved exceeds \$120,000 in any fiscal year and a related person had, has or will have a direct or indirect material interest, including without limitation, purchases of goods or services by or from the related person or entities in which the related person has a material interest, including indebtedness, guarantees of indebtedness and employment by us of a related person. In reviewing and approving any such transactions, our audit committee is tasked to consider all relevant facts and circumstances, including, but not limited to, whether the transaction is on terms comparable to those that could be obtained in an arm's length transaction and the extent of the related person's interest in the transaction. All of the transactions described in this section occurred prior to the adoption of this policy.

PRINCIPAL STOCKHOLDERS

The following table sets forth information with respect to the beneficial ownership of our common stock, as of _____, 2018, and as adjusted to reflect the sale of shares of common stock in this offering, for:

- each person or group of affiliated persons known by us to beneficially own more than 5% of our common stock;
- each of our named executive officers;
- each of our directors; and
- all of our executive officers and directors as a group.

The number of shares beneficially owned by each stockholder is determined under rules issued by the SEC. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power. Applicable percentage ownership is based on _____ shares of common stock outstanding as of _____, 2018, assuming the conversion of all outstanding shares of preferred stock into common stock. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, shares of common stock subject to options, warrants or other rights held by such person that are currently exercisable or will become exercisable within 60 days of _____, 2018 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person. Unless noted otherwise, the address of all listed stockholders is 620 Memorial Drive, Suite 200, Cambridge, MA 02139. Each of the stockholders listed has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

Name of Beneficial Owner	Shares Beneficially Owned Prior to Offering		Shares Beneficially Owned After Offering	
	Number	Percentage	Number	Percentage
5% or Greater Stockholders				
Entities affiliated Flagship Pioneering ⁽¹⁾		%		%
Named Executive Officers and Directors				
Balkrishan (Simba) Gill, Ph.D. ⁽²⁾		%		%
Mark Bodmer, Ph.D. ⁽³⁾		%		%
Duncan McHale, M.D., Ph.D. ⁽⁴⁾		%		%
Noubar B. Afeyan, Ph.D. ⁽¹⁾		%		%
Professor the Lord Ara Darzi ⁽⁵⁾		%		%
David R. Epstein ⁽⁶⁾		%		%
Theodose Melas-Kyriazi ⁽⁷⁾		%		%
David P. Perry ⁽⁸⁾		%		%
All executive officers and directors as a group (_____ persons)		%		%

* Less than 1%.

- (1) Consists of (a) _____ shares of common stock held by Flagship VentureLabs IV LLC (“Flagship VentureLabs IV”), (b) _____ shares of common stock held by Flagship VentureLabs V LLC (“Flagship VentureLabs V”), (c) _____ shares of common stock held by Flagship Ventures Fund IV, L.P. (“Flagship Fund IV”), (d) _____ shares of common stock held by Flagship Ventures Fund IV-Rx, L.P. (“Flagship Fund IV-Rx”), (e) _____ shares of common stock held by Flagship Ventures Fund V, L.P. (“Flagship Fund V”), (f) _____ shares of common stock held by Flagship V VentureLabs Rx Fund, L.P. (“Flagship VentureLabs V-Rx”), (g) _____ shares of common stock held by Nutritional Health Disruptive Innovation Fund, L.P. (“Flagship Nutritional Health Disruptive Innovation Fund”) and (h) _____ shares of common stock held by Nutritional Health Side Fund, L.P. (“Flagship Nutritional Health Side Fund”) (Flagship VentureLabs IV, Flagship Fund IV, Flagship Fund IV-Rx, the “Flagship Fund IV Funds”; and Flagship VentureLabs V, Flagship Fund V, and Flagship VentureLabs V-Rx, Flagship Nutritional Health Side Fund,

and Flagship Nutritional Health Disruptive Innovation Fund, the “Flagship Fund V Funds”). Flagship Fund IV is a member of Flagship VentureLabs IV and also serves as its manager. Flagship Fund V is a member of Flagship VentureLabs V and also serves as its manager. The general partner of each of Flagship Fund IV and Flagship Fund IV-Rx is Flagship Ventures Fund IV General Partner LLC (“Flagship Fund IV GP”), and the general partner of Flagship Fund V, Flagship VentureLabs V-Rx, Flagship Nutritional Health Disruptive Innovation Fund and Flagship Nutritional Health Side Fund is Flagship Ventures Fund V General Partner LLC (“Flagship Fund V GP” and together with Flagship Fund IV GP, the “Flagship General Partners”). Noubar Afeyan is a director of Evelo Biosciences and a member of the Flagship General Partners. In addition, Noubar B. Afeyan, Ph.D. and Edwin M. Kania, Jr. are the managers of Flagship Fund IV GP and each of these individuals may be deemed to share voting and investment power with respect to all shares held by Flagship Fund IV Funds. Noubar B. Afeyan serves as the managing member of the Flagship Fund V GP and possess sole voting and investment control over the shares held by the Flagship Fund V Funds. Neither of the Flagship General Partners directly own any of the shares held by the Flagship Funds, and each of the Flagship General Partners, Noubar B. Afeyan and Edwin M. Kania Jr. disclaims beneficial ownership of such shares except to the extent of its or his pecuniary interest therein. The mailing address of the Flagship Funds is 55 Cambridge Parkway, Suite 800E, Cambridge, MA 02142.

- (2) Includes shares of common stock underlying outstanding stock options that are or will be immediately exercisable within 60 days of , 2018 and shares of unvested restricted stock.
- (3) Includes shares of common stock underlying outstanding stock options that are or will be immediately exercisable within 60 days of , 2018 and shares of unvested restricted stock.
- (4) Includes shares of common stock underlying outstanding stock options that are or will be immediately exercisable within 60 days of , 2018 and shares of unvested restricted stock.
- (5) Includes shares of common stock underlying outstanding stock options that are or will be immediately exercisable within 60 days of , 2018.
- (6) Includes shares of common stock underlying outstanding stock options that are or will be immediately exercisable within 60 days of , 2018.
- (7) Includes shares of common stock underlying outstanding stock options that are or will be immediately exercisable within 60 days of , 2018.
- (8) Includes shares of common stock underlying outstanding stock options that are or will be immediately exercisable within 60 days of , 2018.

DESCRIPTION OF CAPITAL STOCK

General

The following description summarizes some of the terms of our restated certificate of incorporation and amended and restated bylaws that will become effective upon the closing of this offering, our outstanding warrants, the investors' rights agreement and of the General Corporation Law of the State of Delaware. Because it is only a summary, it does not contain all the information that may be important to you. For a complete description, you should refer to our amended and restated certificate of incorporation, amended and restated bylaws, warrants and investors' rights agreement, copies of which have been or will be filed as exhibits to the registration statement of which this prospectus is a part, as well as the relevant provisions of the General Corporation Law of the State of Delaware. The description of our common stock and preferred stock reflects changes to our capital structure that will occur immediately prior the closing of this offering.

In connection with this offering, we will effectuate a -for- split of our common stock. Following the closing of this offering, our authorized capital stock will consist of shares of common stock, par value \$0.001 per share, and shares of preferred stock, par value \$0.001 per share.

As of , 2018, there were shares of our common stock outstanding, including shares of unvested restricted common stock subject to repurchase by us, and shares of our common stock issuable upon the automatic conversion of all outstanding shares of our preferred stock in connection with this offering, held of record by stockholders.

Common Stock

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders and do not have cumulative voting rights. An election of directors by our stockholders shall be determined by a plurality of the votes cast by the stockholders entitled to vote on the election. Subject to the supermajority votes for some matters, other matters shall be decided by the affirmative vote of our stockholders having a majority in voting power of the votes cast by the stockholders present or represented and voting on such matter. Our restated certificate of incorporation and amended and restated bylaws also provide that our directors may be removed only for cause and only by the affirmative vote of the holders of at least two-thirds in voting power of the outstanding shares of capital stock entitled to vote thereon. In addition, the affirmative vote of the holders of at least two-thirds in voting power of the outstanding shares of capital stock entitled to vote thereon is required to amend or repeal, or to adopt any provision inconsistent with, several of the provisions of our amended and restated certificate of incorporation. See below under "—Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws—Amendment of Charter Provisions." Holders of common stock are entitled to receive proportionately any dividends as may be declared by our board of directors, subject to any preferential dividend rights of any series of preferred stock that we may designate and issue in the future.

In the event of our liquidation or dissolution, the holders of common stock are entitled to receive proportionately our net assets available for distribution to stockholders after the payment of all debts and other liabilities and subject to the prior rights of any outstanding preferred stock. Holders of common stock have no preemptive, subscription, redemption or conversion rights. Our outstanding shares of common stock are, and the shares offered by us in this offering will be, when issued and paid for, validly issued, fully paid and nonassessable. The rights, preferences and privileges of holders of common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Preferred Stock

Under the terms of our amended and restated certificate of incorporation that will become effective upon the closing of this offering, our board of directors is authorized to direct us to issue shares of preferred stock in one

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or more series without stockholder approval. Our board of directors has the discretion to determine the rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock.

The purpose of authorizing our board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions, future financings and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or could discourage a third party from seeking to acquire, a majority of our outstanding voting stock. Upon the closing of this offering, there will be no shares of preferred stock outstanding, and we have no present plans to issue any shares of preferred stock.

Warrants

Mayo Warrant

On June 10, 2016, we issued a warrant, or the Mayo warrant, to the Mayo Foundation for Medical Education and Research, or Mayo Foundation, in connection with our research and license agreement with Mayo Foundation. The Mayo warrant provides Mayo Foundation a right to purchase 549 shares of our common stock at a purchase price of \$0.01 per share, subject to adjustment in the event of the achievement of certain research funding milestones.

The Mayo warrant provides that, unless earlier exercised, it will be automatically cashless exercised immediately prior to its termination, which will be the date of the closing of this offering. Investors can determine the number of shares issuable upon the automatic cashless exercise of this warrant by (i) subtracting \$0.01 from the public offering price, (ii) dividing the remainder by the public offering price and (iii) multiplying the quotient by . Based on an assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover of this prospectus, this warrant would be cashless exercised for shares of common stock immediately prior to the closing of this offering.

A \$1.00 increase or decrease in the assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, would, in case of an increase, increase the number of shares of common stock issuable by shares and, in case of a decrease, decrease the number of shares of common stock issuable by shares, upon the automatic cashless exercise of the Mayo warrant.

Bank Warrants

In connection with entering into our prior loan and security agreement, in November 2015, we issued Comerica Bank a warrant to purchase 100,000 shares of our Series A preferred stock at an exercise price of \$0.60 per share. If unexercised, the warrant will expire on November 13, 2025. In connection with entering into our loan and security agreement, in August 2016, we issued Pacific Western Bank a warrant to purchase 62,497 shares of Series A-1 preferred stock at an exercise price of \$0.60 per share and a warrant to purchase 31,248 shares of Series A-3 preferred stock at an exercise price of \$1.20 per share. If unexercised, these warrants will expire on January 28, 2026 and August 15, 2026, respectively. In connection with the execution of the third amendment to the loan and security agreement, in February 2018, we issued Pacific Western Bank a warrant to purchase 34,722 shares of Series B preferred stock at an exercise price of \$1.80 per share. If unexercised, the warrant will expire on February 7, 2028. Collectively, we refer to these warrants as the Bank warrants.

Options

As of , 2018, options to purchase shares of our common stock were outstanding under our 2015 Stock Incentive Plan, of which were exercisable and of which were vested as of that date.

Registration Rights

Upon the closing of this offering, holders of _____ shares of our common stock, including shares issuable upon the exercise of the Bank warrants, will be entitled to the following rights with respect to the registration of such shares for public resale under the Securities Act, pursuant to an amended and restated investors' rights agreement by and among us and certain of our stockholders, until such shares can otherwise be sold without restriction under Rule 144, or until the rights otherwise terminate pursuant to the terms of the investors' rights agreement. The registration of shares of common stock as a result of the following rights being exercised would enable holders to trade these shares without restriction under the Securities Act when the applicable registration statement is declared effective.

If at any time beginning 180 days after the effective date of this offering the holders of a majority of the registrable securities request in writing that we effect a registration with respect to all or part of such registrable securities then outstanding, we may be required to register their shares. We are obligated to effect at most two registrations in response to these demand registration rights. If the holders requesting registration intend to distribute their shares by means of an underwriting, the managing underwriter of such offering will have the right to limit the numbers of shares to be underwritten for reasons related to the marketing of the shares.

Piggyback Registration Rights

If at any time after this offering we propose to register any shares of our common stock under the Securities Act, subject to certain exceptions, the holders of registrable securities will be entitled to notice of the registration and to include their shares of registrable securities in the registration. If our proposed registration involves an underwriting, the managing underwriter of such offering will have the right to limit the number of shares to be underwritten for reasons related to the marketing of the shares.

Form S-3 Registration Rights

If, at any time after we become entitled under the Securities Act to register our shares on a registration statement on Form S-3, the holders of at least 30% of the registrable securities then outstanding request in writing that we effect a registration with respect to registrable securities at an aggregate price to the public in the offering of at least \$5,000,000, we will be required to effect such registration; provided, however, that we will not be required to effect such a registration if, within the twelve month period preceding such request, we have already effected two registrations on Form S-3 for the holders of registrable securities.

Expenses

Ordinarily, other than underwriting discounts and commissions, we will be required to pay all expenses incurred by us related to any registration effected pursuant to the exercise of these registration rights. These expenses may include all registration and filing fees, printing expenses, fees and disbursements of our counsel, reasonable fees and disbursements of a counsel for the selling security holders and blue sky fees and expenses.

Termination of Registration Rights

The registration rights terminate upon the earlier of seven years after the effective date of the registration statement of which this prospectus is a part, the closing of a deemed liquidation event, as defined in the investors' rights agreement, or, with respect to the registration rights of an individual holder, when the holder can sell all of such holder's registrable securities in a three-month period without restriction under Rule 144 under the Securities Act.

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

Some provisions of Delaware law, our restated certificate of incorporation and our amended and restated bylaws could make the following transactions more difficult: an acquisition of us by means of a tender offer; an

acquisition of us by means of a proxy contest or otherwise; or the removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions which provide for payment of a premium over the market price for our shares.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of the increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Undesignated Preferred Stock

The ability of our board of directors, without action by the stockholders, to issue up to _____ shares of undesignated preferred stock, which may include voting or other rights, dividend rights and preferences, rights to convert to common stock or other securities, and liquidation rights and preferences. The existence of authorized but unissued shares of preferred stock may enable our board of directors to render it more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise.

Special Meeting of Stockholders

Our amended and restated bylaws provide that a special meeting of stockholders may be called only by our chairman of the board, chief executive officer or president (in the absence of a chief executive officer), or by a resolution adopted by a majority of our board of directors.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals to be brought before a stockholder meeting and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors. The notice must contain certain information specified in our amended and restated bylaws. These procedures may have the effect of precluding the conduct of certain business at a meeting or the nomination of candidates for election as directors by stockholders if the proper procedures are not followed.

Elimination of Stockholder Action by Written Consent

Our restated certificate of incorporation eliminates the right of stockholders to act by written consent without a meeting.

Staggered Board

Our board of directors is divided into three classes. The directors in each class will serve for a three-year term, one class being elected each year by our stockholders. For more information on the classified board, see “Management—Board Composition and Election of Directors.” This system of electing and removing directors may tend to discourage a third-party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

Removal of Directors and Vacancies

Our restated certificate of incorporation provides that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of the holders of at least two-thirds in voting power of the outstanding shares of stock entitled to vote in

the election of directors. Our amended and restated bylaws give our board of directors the exclusive right to elect a director to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from filling vacancies on our board of directors.

Stockholders Not Entitled to Cumulative Voting

Our restated certificate of incorporation does not permit stockholders to cumulate their votes in the election of directors. Accordingly, the holders of a majority of the outstanding shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they choose, other than any directors that holders of our preferred stock may be entitled to elect.

Delaware Anti-Takeover Statute

We are subject to Section 203 of the General Corporation Law of the State of Delaware, which prohibits persons deemed to be “interested stockholders” from engaging in a “business combination” with a publicly held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, 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 voting stock. Generally, a “business combination” includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors.

Choice of Forum

Our restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative form, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for: (1) any derivative action or proceeding brought on our behalf; (2) any action asserting a claim of breach of a fiduciary duty or other wrongdoing by any of our directors, officers, employees or agents to us or our stockholders; (3) any action asserting a claim against us arising pursuant to any provision of the General Corporation Law of the State of Delaware or our certificate of incorporation or bylaws; (4) any action to interpret, apply, enforce or determine the validity of our certificate of incorporation or bylaws; or (5) any action asserting a claim governed by the internal affairs doctrine. Our restated certificate of incorporation also provides that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of and to have consented to this choice of forum provision. It is possible that a court of law could rule that the choice of forum provision contained in our restated certificate of incorporation is inapplicable or unenforceable if it is challenged in a proceeding or otherwise.

Amendment of Charter Provisions

The amendment of any of the above provisions, except for the provision making it possible for our board of directors to issue preferred stock and the provision prohibiting cumulative voting, would require approval by holders of at least two-thirds in voting power of the outstanding shares of stock entitled to vote thereon.

The provisions of Delaware law, our restated certificate of incorporation and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in the composition of our board and management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests

Transfer Agent and Registrar

The transfer agent and registrar for our common stock will be _____.

Stock Exchange Listing

We intend to apply to have our common stock listed on The Nasdaq Global Market under the symbol “_____.”

SHARES ELIGIBLE FOR FUTURE SALE

Immediately prior to this offering, there was no public market for our common stock. Future sales of substantial amounts of common stock in the public market, or the perception that such sales may occur, could adversely affect the market price of our common stock.

Upon the closing of this offering, we will have outstanding an aggregate of _____ shares of common stock, assuming the issuance of _____ shares of common stock offered by us in this offering, the automatic conversion of all outstanding shares of our preferred stock into _____ shares of our common stock and no exercise of options or warrants after _____, 2018. Of these shares, all shares sold in this offering will be freely tradable without restriction or further registration under the Securities Act, except for any shares purchased by our “affiliates,” as that term is defined in Rule 144 under the Securities Act, whose sales would be subject to the Rule 144 resale restrictions described below, other than the holding period requirement.

The remaining _____ shares of common stock will be “restricted securities,” as that term is defined in Rule 144 under the Securities Act. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rules 144 or 701 under the Securities Act, which are summarized below. We expect that substantially all of these shares will be subject to the 180-day lock-up period under the lock-up agreements described below. Upon expiration of the lock-up period, we estimate that approximately _____ shares will be available for sale in the public market, subject in some cases to applicable volume limitations under Rule 144.

In addition, of the _____ shares of our common stock that were subject to stock options outstanding as of _____, 2018, options to purchase _____ shares of common stock were vested as of _____, 2018 and, upon exercise, these shares will be eligible for sale subject to the lock-up agreements described below and Rules 144 and 701 under the Securities Act.

Lock-Up Agreements

We and each of our directors and executive officers and holders of substantially all of our outstanding capital stock, have agreed that, without the prior written consent of Morgan Stanley & Co. LLC and Cowen and Company, LLC on behalf of the underwriters, we and they will not, subject to certain exceptions, during the period ending 180 days after the date of this prospectus:

- 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, lend, 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 common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of our common stock,

whether any transaction described above is to be settled by delivery of our common stock or such other securities, in cash or otherwise.

Upon the expiration of the applicable lock-up periods, substantially all of the shares subject to such lock-up restrictions will become eligible for sale, subject to the limitations discussed above. For a further description of these lock-up agreements, please see “Underwriting.”

Rule 144

Affiliate Resales of Restricted Securities

In general, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, a person who is an affiliate of ours, or who was an affiliate at any time during the 90 days before a sale,

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who has beneficially owned shares of our common stock for at least six months would be entitled to sell in “broker’s transactions” or certain “riskless principal transactions” or to market makers, a number of shares within any three-month period that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after this offering; or
- the average weekly trading volume in our common stock on during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Affiliate resales under Rule 144 are also subject to the availability of current public information about us. In addition, if the number of shares being sold under Rule 144 by an affiliate during any three-month period exceeds 5,000 shares or has an aggregate sale price in excess of \$50,000, the seller must file a notice on Form 144 with the SEC and Nasdaq concurrently with either the placing of a sale order with the broker or the execution directly with a market maker.

Non-Affiliate Resales of Restricted Securities

In general, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, a person who is not an affiliate of ours at the time of sale, and has not been an affiliate at any time during the three months preceding a sale, and who has beneficially owned shares of our common stock for at least six months but less than a year, is entitled to sell such shares subject only to the availability of current public information about us. If such person has held our shares for at least one year, such person can resell under Rule 144(b)(1) without regard to any Rule 144 restrictions, including the 90-day public company requirement and the current public information requirement.

Non-affiliate resales are not subject to the manner of sale, volume limitation or notice filing provisions of Rule 144.

Rule 701

In general, under Rule 701, any of an issuer’s employees, directors, officers, consultants or advisors who purchases shares from the issuer in connection with a compensatory stock or option plan or other written agreement before the effective date of a registration statement under the Securities Act is entitled to sell such shares 90 days after such effective date in reliance on Rule 144. An affiliate of the issuer can resell shares in reliance on Rule 144 without having to comply with the holding period requirement, and non-affiliates of the issuer can resell shares in reliance on Rule 144 without having to comply with the current public information and holding period requirements.

The SEC has indicated that Rule 701 will apply to typical stock options granted by an issuer before it becomes subject to the reporting requirements of the Exchange Act, along with the shares acquired upon exercise of such options, including exercises after an issuer becomes subject to the reporting requirements of the Exchange Act.

Equity Plans

We intend to file one or more registration statements on Form S-8 under the Securities Act to register all shares of common stock subject to outstanding stock options and common stock issued or issuable under our stock plans. We expect to file the registration statement covering shares offered pursuant to our stock plans shortly after the date of this prospectus, permitting the resale of such shares by non-affiliates in the public market without restriction under the Securities Act and the sale by affiliates in the public market, subject to compliance with the resale provisions of Rule 144.

Registration Rights

Upon the closing of this offering, the holders of _____ shares of common stock, which includes all of the shares of common stock issuable upon the automatic conversion of our preferred stock upon the closing of this offering, or their transferees will be entitled to various rights with respect to the registration of these shares under the Securities Act. Registration of these shares under the Securities Act would result in these shares becoming fully tradable without restriction under the Securities Act immediately upon the effectiveness of the registration, except for shares purchased by affiliates. See “Description of Capital Stock—Registration Rights” for additional information. Shares covered by a registration statement will be eligible for sale in the public market upon the expiration or release from the terms of the lock-up agreement.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following discussion is a summary of the material U.S. federal income tax consequences to non-U.S. holders (as defined below) of the purchase, ownership and disposition of the shares of common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or foreign tax laws are not discussed. This discussion is based on the Internal Revenue Code of 1986, as amended, or the Code, Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service, or IRS, in effect as of the date of this offering. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a non-U.S. holder of our common stock. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position regarding the tax consequences of the purchase, ownership and disposition of our common stock.

This discussion is limited to non-U.S. holders that hold our common stock as a “capital asset” within the meaning of Section 1221 of the Code (property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a non-U.S. holder’s particular circumstances, including the impact of the alternative minimum tax, the rules regarding “qualified small business stock” within the meaning of Section 1202 of the Code, or the unearned income Medicare contribution tax. In addition, it does not address consequences relevant to holders subject to particular rules, including, without limitation:

- U.S. expatriates and certain former citizens or long-term residents of the United States;
- persons holding our common stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies, and other financial institutions;
- brokers, dealers or traders in securities or currencies;
- controlled foreign corporations,” “passive foreign investment companies,” and corporations that accumulate earnings to avoid U.S. federal income tax;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons subject to special tax accounting rules as a result of any item of gross income with respect to the stock being taken into account in an applicable financial statement;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation; and
- tax-qualified retirement plans.

If a partnership (or other entity treated as a partnership for U.S. federal income tax purposes) holds our common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding our common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

THIS DISCUSSION IS FOR INFORMATION PURPOSES ONLY AND IS NOT INTENDED AS LEGAL OR TAX ADVICE. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH

RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of a Non-U.S. Holder

For purposes of this discussion, a “non-U.S. holder” is any beneficial owner of our common stock that is not a “U.S. person,” a partnership or an entity disregarded as separate from its owner, each for United States federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized under the laws of the United States, 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 that (1) is subject to the primary supervision of a U.S. court and the control of one or more United States persons (within the meaning of Section 7701(a)(30) of the Code), or (2) has made a valid election under applicable Treasury Regulations to continue to be treated as a United States person.

Distributions

As described in the section entitled “Dividend Policy,” we do not anticipate declaring or paying dividends to holders of our common stock in the foreseeable future. However, if we do make distributions on our common stock, such distributions of cash or property on our common stock will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and first be applied against and reduce a non-U.S. holder’s adjusted tax basis in its common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below in the section relating to the sale or disposition of our common stock. Because we may not know the extent to which a distribution is a dividend for U.S. federal income tax purposes at the time it is made, for purposes of the withholding rules discussed below we or the applicable withholding agent may treat the entire distribution as a dividend.

Subject to the discussion below on backup withholding and foreign accounts, dividends paid to a non-U.S. holder of our common stock that are not effectively connected with the non-U.S. holder’s conduct of a trade or business within the United States will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty).

Non-U.S. holders will be entitled to a reduction in or an exemption from withholding on dividends as a result of either (a) an applicable income tax treaty or (b) the non-U.S. holder holding our common stock in connection with the conduct of a trade or business within the United States and dividends being effectively connected with that trade or business. To claim such a reduction in or exemption from withholding, the non-U.S. holder must provide the applicable withholding agent with a properly executed (a) IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) claiming an exemption from or reduction of the withholding tax under the benefit of an income tax treaty between the United States and the country in which the non-U.S. holder resides or is established, or (b) IRS Form W-8ECI stating that the dividends are not subject to withholding tax because they are effectively connected with the conduct by the non-U.S. holder of a trade or business within the United States, as may be applicable. These certifications must be provided to the applicable withholding agent prior to the payment of dividends and must be updated periodically. Non-U.S. holders that do not timely provide the applicable withholding agent with the required certification, but that qualify for a reduced rate under an applicable income tax treaty, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

If dividends paid to a non-U.S. holder are effectively connected with the non-U.S. holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the non-U.S. holder maintains a permanent establishment in the United States to which such dividends are attributable), then, although exempt from U.S. federal withholding tax (provided the non-U.S. holder provides appropriate certification, as described above), the non-U.S. holder will be subject to U.S. federal income tax on such dividends on a net income basis at the regular graduated U.S. federal income tax rates. In addition, a non-U.S. holder that is a corporation may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on its effectively connected earnings and profits for the taxable year that are attributable to such dividends, as adjusted for certain items. Non-U.S. holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

Sale or Other Disposition of Common Stock

Subject to the discussions below on backup withholding and foreign accounts, a non-U.S. holder will not be subject to U.S. federal income tax on any gain realized upon the sale or other disposition of our common stock unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the non-U.S. holder maintains a permanent establishment in the United States to which such gain is attributable);
- the non-U.S. holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our common stock constitutes U.S. real property interests, or USRPIs, by reason of our status as a U.S. real property holding corporation, or USRPHC, for U.S. federal income tax purposes.

Gain described in the first bullet point above will generally be subject to U.S. federal income tax on a net income basis at the regular graduated U.S. federal income tax rates. A non-U.S. holder that is a foreign corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected gain, as adjusted for certain items.

A non-U.S. holder described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on any gain derived from the disposition, which may be offset by certain U.S. source capital losses of the non-U.S. holder (even though the individual is not considered a resident of the United States) provided the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we are not currently and do not anticipate becoming a USRPHC. Because the determination of whether we are a USRPHC depends on the fair market value of our USRPIs relative to the fair market value of our other business assets and our non-U.S. real property interests, however, there can be no assurance we are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition by a non-U.S. holder of our common stock will not be subject to U.S. federal income tax if our common stock is "regularly traded," as defined by applicable Treasury Regulations, on an established securities market, and such non-U.S. holder owned, actually and constructively, 5% or less of our common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the non-U.S. holder's holding period. If we are a USRPHC and either our common stock is not regularly traded on an established securities market or a non-U.S. holder holds more than 5% of our outstanding common stock, directly or indirectly, during the applicable testing period, such non-U.S. holder's gain on the disposition of shares of our common stock generally will be taxed in the same manner as gain that is effectively connected with the conduct of a U.S. trade or business, except that the branch profits tax generally will not apply. If we are a USRPHC and our common stock is not regularly traded on an established securities market, a non-U.S. holder's proceeds received on the

disposition of shares will also generally be subject to withholding at a rate of 15%. Prospective investors are encouraged to consult their tax advisors regarding the possible consequences to them if we are, or were to become, a USRPHC.

Non-U.S. holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Subject to the discussion below on foreign accounts, a non-U.S. holder will not be subject to backup withholding with respect to distributions on our common stock we make to the non-U.S. holder, provided the applicable withholding agent does not have actual knowledge or reason to know such holder is a United States person and the holder certifies its non-U.S. status, such as by providing a valid IRS Form W-8BEN, W-8BEN-E or W-8ECI, or other applicable certification. However, information returns generally will be filed with the IRS in connection with any distributions (including deemed distributions) made on our common stock to the non-U.S. holder, regardless of whether any tax was actually withheld. Copies of these information returns may also be made available under the provisions of a specific treaty or agreement to the tax authorities of the country in which the non-U.S. holder resides or is established.

Information reporting and backup withholding may apply to the proceeds of a sale or other taxable disposition of our common stock within the United States, and information reporting may (although backup withholding generally will not) apply to the proceeds of a sale or other taxable disposition of our common stock outside the United States conducted through certain U.S.-related financial intermediaries, in each case, unless the beneficial owner certifies under penalty of perjury that it is a non-U.S. holder on IRS Form W-8BEN or W-8BEN-E, or other applicable form (and the payor does not have actual knowledge or reason to know that the beneficial owner is a U.S. person) or such owner otherwise establishes an exemption. Proceeds of a disposition of our common stock conducted through a non-U.S. office of a non-U.S. broker generally will not be subject to backup withholding or information reporting.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a non-U.S. holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Withholding taxes may be imposed under the Foreign Account Tax Compliance Act, or FATCA, on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends (including deemed dividends) paid on our common stock, or gross proceeds from the sale or other disposition of our common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (1) the foreign financial institution undertakes certain diligence and reporting obligations, (2) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (3) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States-owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends (including deemed dividends) paid on our common stock, and will apply to payments of gross proceeds from the sale or other disposition of common stock on or after January 1, 2019. Because we may not know the extent to which a distribution is a dividend for U.S. federal income tax purposes at the time it is made, for purposes of these withholding rules we or the applicable withholding agent may treat the entire distribution as a dividend. Prospective investors should consult their tax advisors regarding the potential application of these withholding provisions.

UNDERWRITING

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Morgan Stanley & Co. LLC and Cowen and Company, LLC are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares indicated below:

Name	Number of Shares
Morgan Stanley & Co. LLC	
Cowen and Company, LLC	
BMO Capital Markets Corp.	
JMP Securities LLC	
Total:	

The underwriters and the representatives are collectively referred to as the “underwriters” and the “representatives,” respectively. The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters’ over-allotment option described below.

The underwriters initially propose to offer part of the shares of common stock directly to the public at the offering price listed on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of \$ per share under the public offering price. After the initial offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the representatives.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to additional shares of common stock at the public offering price listed on the cover page of this prospectus, less underwriting discounts and commissions. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of common stock offered by this prospectus. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of common stock as the number listed next to the underwriter’s name in the preceding table bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total public offering price, underwriting discounts and commissions, and proceeds before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters’ option to purchase up to an additional shares of common stock.

	Per Share	Total	
		No Exercise	Full Exercise
Public offering price	\$	\$	\$
Underwriting discounts and commissions to be paid by us	\$	\$	\$
Proceeds, before expenses, to us	\$	\$	\$

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately \$. We have agreed to reimburse the underwriters for expense relating to clearance of this offering with the Financial Industry Regulatory Authority up to \$.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed 5% of the total number of shares of common stock offered by them.

We intend to apply to have our common stock listed on The Nasdaq Global Market under the symbol “ .”

We and all directors and officers and the holders of substantially all of our outstanding stock and stock options have agreed that, subject to certain exceptions, without the prior written consent of Morgan Stanley & Co. LLC and Cowen and Company, LLC, on behalf of the underwriters, we and they will not, during the period ending 180 days after the date of this prospectus (the “restricted period”):

- 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, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock;
- file any registration statement with the SEC relating to the offering of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock.

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise. In addition, we and each such person agrees that, without the prior written consent of Morgan Stanley & Co. LLC and Cowen and Company, LLC, on behalf of the underwriters, we or such other person will not, during the restricted period, 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.

Morgan Stanley & Co. LLC and Cowen and Company, LLC, in their sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time.

In order to facilitate the offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the over-allotment option. The underwriters can close out a covered short sale by exercising the over-allotment option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the over-allotment option. The underwriters may also sell shares in excess of the over-allotment option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. 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 after pricing that could adversely affect investors who purchase in this offering. As an additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of common stock in the open market to stabilize the price of the common stock. These activities may raise or maintain the market price of the common stock above independent market levels or prevent or retard a decline in the market price of the common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

A prospectus in electronic format may be made available on websites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The representatives may agree to allocate a number of shares of common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters that may make Internet distributions on the same basis as other allocations.

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 have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and expenses.

In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments 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 may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. The underwriters and their respective affiliates may also make investment recommendations 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 or short positions in such securities and instruments.

Pricing of the Offering

Prior to this offering, there has been no public market for our common stock. The initial public offering price was determined by negotiations between us and the representatives. Among the factors considered in determining the initial public offering price were our future prospects and those of our industry in general, our sales, earnings and certain other financial and operating information in recent periods, and the price-earnings ratios, price-sales ratios, market prices of securities, and certain financial and operating information of companies engaged in activities similar to ours.

Selling Restrictions

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, 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:

- (a) to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- (b) to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), subject to obtaining the prior consent of the representatives for any such offer; or
- (c) 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

In the United Kingdom, this prospectus is only addressed to and directed as qualified investors who are (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the Order); or (ii) high net worth entities and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as “relevant persons”). Any investment or investment activity to which this prospectus relates is available only to relevant persons and will only be engaged with relevant persons. Any person who is not a relevant person should not act or rely on this prospectus or any of its contents.

Canada

The common stock may be sold in Canada 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 common stock must be made in accordance with an exemption form, 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 of these rights or consult with a legal advisor.

Pursuant to section 3A.3 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.

Hong Kong

The common stock may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong), or Companies (Winding Up and Miscellaneous Provisions) Ordinance, or which do not constitute an invitation to the public within the meaning of the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong), or Securities and Futures Ordinance, or (ii) to “professional investors” as defined in the Securities and Futures Ordinance and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance, and no advertisement, invitation or document relating to the shares may be issued or may be in the possession of any person for the purpose of issue (in each case 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 in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares of common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” in Hong Kong as defined in the Securities and Futures Ordinance and any rules made thereunder.

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 common stock may not be circulated or distributed, nor may the

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 (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, 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, in each case subject to conditions set forth in the SFA.

Where the shares of 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, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferable for 6 months after that corporation has acquired the common stock under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer in that corporation's securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore, or Regulation 32.

Where the shares of common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for 6 months after that trust has acquired the common stock under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than S\$200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32.

Japan

The common stock has not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended), or the FIEA. The common stock may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, 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 of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

We estimate that our share of the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately \$3,500,000. We will agree to reimburse the underwriters for expenses related to any applicable state securities filings and to the Financial Industry Regulatory Authority incurred by them in connection with this offering in an amount up to \$35,000. The underwriters will agree to reimburse us, or will pay and not seek reimbursement from us, for certain out-of-pocket expenses incurred by us in connection with this offering.

We will agree to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Certain of the underwriters and their respective affiliates have provided, and may in the future provide, a variety of these services to the issuer and to persons and entities with relationships with the issuer, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of the issuer (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with the issuer. The underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

Notice to Prospective Investors in Switzerland

The shares 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, the Company 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 (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.

Notice to Prospective Investors in the 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.

Notice to Prospective Investors in Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission, 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 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 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 account of 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 to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Latham & Watkins LLP. Certain legal matters will be passed upon for the underwriters by Goodwin Procter LLP.

EXPERTS

The consolidated financial statements of Evelo Biosciences, Inc. at December 31, 2017 and 2016 , and for each of the two-years in the period ended December 31, 2017, appearing in this Prospectus and Registration Statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of common stock offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed therewith. For further information about us and the common stock offered hereby, we refer you to the registration statement and the exhibits and schedules filed thereto. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement. Upon completion of this offering, we will be required to file periodic reports, proxy statements, and other information with the SEC pursuant to the Securities Exchange Act of 1934. You may read and copy this information at the Public Reference Room of the SEC, 100 F Street, N.E., Room 1580, Washington, District of Columbia. 20549. You may obtain information on the operation of the public reference rooms by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports, proxy statements and other information about registrants, like us, that file electronically with the SEC. The address of that site is www.sec.gov.

EVELO BIOSCIENCES, INC.
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Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Evelo Biosciences, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Evelo Biosciences, Inc. (the Company) as of December 31, 2017 and 2016, the related consolidated statements of operations, convertible preferred stock and stockholders' (deficit) equity, and cash flows for the years then ended, and 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 at December 31, 2017 and 2016, and the results of its operations and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's 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 in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statement are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the 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 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 financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2017.
Boston, Massachusetts
March 5, 2018

Evelo Biosciences, Inc.
Consolidated Balance Sheets
(In thousands, except per share and share amounts)

	December 31, 2017	2016	Pro Forma December 31, 2017 (Unaudited)
Assets			
Current assets:			
Cash and cash equivalents	\$ 38,246	\$ 15,536	\$ 38,246
Prepaid expenses and other current assets	531	184	531
Total current assets	38,777	15,720	38,777
Property and equipment, net	3,496	2,504	3,496
Other assets	1,515	346	1,515
Total assets	<u>\$ 43,788</u>	<u>\$ 18,570</u>	<u>\$ 43,788</u>
Liabilities, convertible preferred stock, and stockholders' (deficit) equity			
Current liabilities:			
Accounts payable	\$ 1,411	\$ 637	\$ 1,411
Shareholder payable	—	1,000	—
Accrued expenses	2,199	441	2,199
Other current liabilities	229	170	229
Total current liabilities	3,839	2,248	3,839
Noncurrent liabilities:			
Long-term debt	9,966	9,931	9,966
Deferred rent	478	584	478
Other noncurrent liabilities	526	281	102
Total liabilities	<u>14,809</u>	<u>13,044</u>	<u>14,385</u>
Convertible preferred stock:			
Convertible preferred stock, \$0.001 par value; 66,311,563 and 38,267,813 shares authorized as of December 31, 2017 and 2016, respectively; 65,833,096 and 38,055,318 shares issued and outstanding as of December 31, 2017 and 2016, respectively; aggregate liquidation preference of \$89,975 and \$33,899 as of December 31, 2017 and 2016, respectively; no shares issued and outstanding, pro forma (unaudited)	83,702	33,863	—
Stockholder's (deficit) equity:			
Common stock, \$0.001 par value, 97,000,000 and 64,000,000 shares authorized at December 31, 2017 and 2016, respectively; 16,880,974 and 16,443,913 shares issued and 15,829,073 and 14,760,091 outstanding at December 31, 2017 and 2016, respectively; 82,714,070 issued and 81,662,169 outstanding, pro forma (unaudited)	16	15	82
Additional paid-in capital	1,683	—	85,743
Accumulated deficit	(56,422)	(28,352)	(56,422)
Total stockholders' (deficit) equity	<u>(54,723)</u>	<u>(28,337)</u>	<u>29,403</u>
Total liabilities, convertible preferred stock and stockholders' (deficit) equity	<u>\$ 43,788</u>	<u>\$ 18,570</u>	<u>\$ 43,788</u>

The accompanying notes are an integral part of these consolidated financial statements.

Evelo Biosciences, Inc.
Consolidated Statements of Operations
(In thousands, except share and per share data)

	Year Ended December 31,	
	2017	2016
Operating expenses:		
Research and development	\$ 19,957	\$ 9,134
General and administrative	7,574	3,891
Total operating expenses	<u>27,531</u>	<u>13,025</u>
Loss from operations	(27,531)	(13,025)
Other (expense) income:		
Interest expense, net	(215)	(287)
Other expenses	<u>(301)</u>	<u>(20)</u>
Other income (expense), net	(516)	(307)
Net loss	\$ (28,047)	\$ (13,332)
Convertible preferred stock dividends	(6,085)	(1,645)
Net loss attributable to common stockholders	<u>\$ (34,132)</u>	<u>\$ (14,977)</u>
Net loss per share attributable to common stockholders, basic and diluted	<u>\$ (2.23)</u>	<u>\$ (1.30)</u>
Weighted average number of common shares outstanding, basic and diluted	<u>15,299,527</u>	<u>11,562,889</u>
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)	<u>\$ (0.36)</u>	
Weighted-average number of shares used in computing pro forma net loss per share, basic and diluted (unaudited)	<u>76,717,860</u>	

The accompanying notes are an integral part of these consolidated financial statements.

Evelo Biosciences, Inc.
Consolidated Statement Convertible Preferred Stock and Stockholders' (Deficit) Equity
(In thousands, except share amounts)

	Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total
	Shares	Amount	Shares	Amount			
Balance-December 31, 2015	12,536,945	\$ 7,773	8,000,000	\$ 8	\$ —	\$ (4,479)	\$ (4,471)
Issuance of Series A-1 and A-3 Preferred Stocks and Common Stock as part of the acquisition of Epiva.	18,851,705	16,950	5,669,562	6	—	(9,413)	(9,407)
Issuance of Series A and A-2 Preferred Stocks for cash, net of issuance costs	6,666,668	7,495	—	—	—	—	—
Vesting of restricted common stock	—	—	881,679	1	66	—	67
Exercise of stock options	—	—	208,850	—	32	—	32
Stock-based compensation expense	—	—	—	—	419	—	419
Accretion of preferred stock to redemption value	—	1,645	—	—	(517)	(1,128)	(1,645)
Net loss	—	—	—	—	—	(13,332)	(13,332)
Balance-December 31, 2016	38,055,318	\$ 33,863	14,760,091	\$ 15	\$ —	\$ (28,352)	\$ (28,337)
Issuance of Series B Preferred Stock for cash, net of issuance costs	27,777,778	49,807	—	—	—	—	—
Vesting of restricted common stock	—	—	631,921	1	56	—	57
Exercise of stock options	—	—	435,061	—	79	—	79
Other issuances of common stock	—	—	2,000	—	15	—	15
Accretion of preferred stock to redemption value	—	32	—	—	(9)	(23)	(32)
Stock-based compensation expense	—	—	—	—	1,542	—	1,542
Net loss	—	—	—	—	—	(28,047)	(28,047)
Balance- December 31, 2017	65,833,096	\$ 83,702	15,829,073	\$ 16	\$ 1,683	\$ (56,422)	\$ (54,723)
Conversion of preferred stock into common stock (unaudited)	(65,833,096)	(83,702)	65,833,096	66	83,636	—	83,702
Reclassification of warrant to purchase preferred stock to stockholders' (deficit) equity (unaudited)	—	—	—	—	424	—	424
Balance- December 31, 2017 pro forma (unaudited)	—	\$ —	81,662,169	\$ 82	\$ 85,743	\$ (56,422)	\$ 29,403

The accompanying notes are an integral part of these consolidated financial statements.

Evelo Biosciences, Inc.
Consolidated Statements of Cash Flows
(In thousands)

	Year Ended December 31,	
	2017	2016
Operating activities		
Net loss	\$ (28,047)	\$ (13,332)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation expense	1,542	419
Depreciation expense	834	495
Change in fair value of warrant liability	301	20
Non-cash interest expense	35	28
Gain on sale of property and equipment	—	(2)
Changes in assets and liabilities excluding effect of assets and liabilities assumed in acquisition of Epiva (Note 4):		
Prepaid expenses and other current assets	(347)	(1)
Accounts payable	774	(43)
Accrued expenses and other current liabilities	1,733	273
Other liabilities including deferred rent	(90)	(171)
Net cash used in operating activities	(23,265)	(12,314)
Investing activities		
Cash acquired in the acquisition of Epiva	—	10,486
Purchases of property and equipment	(1,742)	(1,250)
Proceeds from the sale of property and equipment	—	27
Net cash (used in)/provided by investing activities	(1,742)	9,263
Financing activities		
Net proceeds from the issuance of convertible preferred stock	48,903	7,495
Deferred issuance costs	(15)	—
Proceeds from the issuance of long-term debt	—	11,000
Repayment of long-term debt	—	(4,000)
Proceeds from the exercise of stock options and restricted common stock	79	247
Change in stockholders' payable	—	1,000
Net cash provided by financing activities	48,967	15,742
Net increase in cash, cash equivalents and restricted cash	23,960	12,691
Cash, cash equivalents and restricted cash – beginning of year	15,786	3,095
Cash, cash equivalents and restricted cash – end of year	<u>\$ 39,746</u>	<u>\$ 15,786</u>
Supplemental disclosure of cash flow information		
Cash paid for interest	\$ 437	\$ 204
Noncash investing and financing activities		
Accretion of convertible preferred stock to redemption value	\$ 32	\$ 1,645
Issuance of warrants in connection with long-term debt facility	\$ —	\$ 76
Property and equipment additions in accounts payable and accrued expenses	\$ 84	\$ —
Long-term debt assumed in acquisition of Epiva, net of discount	\$ —	\$ 2,923
Net non-cash assets acquired in acquisition of Epiva	\$ —	\$ 57

The accompanying notes are an integral part of these consolidated financial statements.

Evelo Biosciences, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(amounts in thousands except share and per share amounts)

1. Organization and Basis of Presentation

Evelo Biosciences, Inc. (“the Company”) is a biotechnology company which was incorporated in Delaware on May 6, 2014. The Company focuses on the development of monoclonal antibodies affecting the immuno-microbiome for the treatment of autoimmune, immunoinflammatory, metabolic, neurological, neuroinflammatory diseases and cancer. The Company is headquartered in Cambridge, Massachusetts.

The Company is devoting substantially all of its efforts to research and development and raising capital. The Company has not generated any revenue related to its primary business purpose to date. The Company is subject to a number of risks similar to those of other development stage companies, including dependence on key individuals, the need to develop commercially viable products, competition from other companies, many of whom are larger and better capitalized, and the need to obtain adequate additional financing to fund the development of its products.

The Company has funded its operations from the issuance of convertible notes, convertible preferred stock, common stock and debt financing. At December 31, 2017, the Company had cash and cash equivalents of \$38,246 and an accumulated deficit of \$56,422. The Company has an additional \$5,000 of borrowing capacity available under its current debt facility, which it drew down upon in February 2018. In addition, in February 2018, the Company raised \$47,500 in Series C convertible preferred stock. Based on the Company’s current operating plan, the Company has sufficient cash and cash equivalents to support operations for at least one year from the issuance date of these consolidated financial statements. Thereafter the Company will need to obtain additional funding. The Company intends to pursue a public offering of its common stock to fund future operations. If the Company is unable to complete a sufficient public offering in a timely manner, it would need to pursue other financing alternatives such as private financing of debt or equity or collaboration agreements. There can be no assurances, however, that the current operating plan will be achieved or that additional funding will be available on terms acceptable to the Company, or at all.

2. Significant Accounting Policies

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”). Any reference in these notes to applicable guidance is meant to refer to the authoritative United States generally accepted accounting principles as found in the Accounting Standard Codification (“ASC”) and Accounting Standards Updates (“ASU”) of the Financial Accounting Standards Board (“FASB”).

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned, controlled subsidiary, Evelo Biosciences Security Corporation. All intercompany transactions and balances of the subsidiary have been eliminated in consolidation.

Unaudited Pro Forma Financial Information

The accompanying unaudited pro forma consolidated balance sheet as of December 31, 2017 has been prepared to give effect to the automatic conversion of all outstanding shares of convertible preferred stock into shares of common stock, based on a conversion ratio currently in effect, which is 1:1, and the reclassification of the warrant liability into additional paid in capital. The shares of common stock issuable and the proceeds expected to be received in the initial public offering are excluded from such pro forma financial information.

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In the accompanying consolidated statements of operations, the unaudited pro forma net loss attributable to common stockholders used in the calculation of unaudited basic and diluted pro forma net loss per share attributable to common stockholders does not include the effects of the remeasurement of the warrant to purchase convertible preferred stock because it assumes that the conversion of convertible preferred stock warrants into common stock warrants occurred on the later of the beginning of the reporting period or the issuance date of the convertible preferred stock warrant.

The unaudited pro forma basic and diluted weighted average common shares outstanding used in the calculation of unaudited pro forma basic and diluted net loss per share attributable to common stockholders for the year ended December 31, 2017 give effect to the automatic conversion of all outstanding shares of convertible preferred stock into shares of common stock as if the conversion had occurred on the later of January 1, 2017 or the issuance date of the convertible preferred stock for the year ended December 31, 2017. Excluded from pro forma weighted average common shares outstanding is the automatic conversion of 549 warrants into common shares as the automatic conversion is impacted by the offering price which is not known.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results could differ from those estimates.

Concentrations of Credit Risk and Off-Balance Sheet Risk

Financial instruments that potentially expose the Company to concentrations of credit risk primarily consist of cash and cash equivalents. The Company places its cash and cash equivalents in a custodian account in accredited financial institutions. Accordingly, such funds are subject to minimal credit risk. Such deposits have and will continue to exceed federally insured limits. The Company has not experienced any losses on its cash deposits.

As of December 31, 2017 and 2016, the Company has no off-balance sheet risk such as foreign exchange contracts, option contracts, or other foreign hedging arrangements.

The Company is subject to a number of risks similar to other early-stage biopharmaceutical companies, including, but not limited to, the need to obtain adequate additional funding, possible failure of current or future preclinical testing or clinical trials, its reliance on third parties to conduct its clinical trials, the need to obtain regulatory and marketing approvals for its product candidates, competitors developing new technological innovations, the need to successfully commercialize and gain market acceptance of the Company's product candidates, its right to develop and commercialize its product candidates pursuant to the terms and conditions of the licenses granted to the Company, protection of proprietary technology, the ability to make milestone, royalty or other payments due under any license or collaboration agreements, and the need to secure and maintain adequate manufacturing arrangements with third parties. If the Company does not successfully commercialize or partner any of its product candidates, it will be unable to generate product revenue or achieve profitability.

Comprehensive Loss

Comprehensive loss includes net loss and certain changes in stockholders' (deficit) equity that are excluded from net loss. For the years ended December 31, 2017 and 2016, comprehensive loss was equal to net loss.

Cash, Cash Equivalents and Restricted Cash

Cash equivalents are comprised of highly liquid investments that are readily convertible into cash with original maturities of three months or less. Cash and cash equivalents include cash held in banks and amounts held in money market funds. Cash equivalents are stated at cost, which approximates market value. The

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Company's restricted cash consists of restricted cash in connection with building leases for the Company's office and laboratory premises. Restricted cash as of December 31, 2017 and 2016 was \$1,500 and \$250, respectively, and is classified within the other assets on the accompanying consolidated balance sheet. The following reconciles cash, cash equivalents and restricted cash as of December 31, 2017 and 2016, as presented on our statements of cash flows to their related balance sheet accounts:

	December 31,	
	2017	2016
Cash and cash equivalents:		
Cash	\$13,204	\$ 697
Money Market Funds	25,042	14,839
Total cash and cash equivalents	38,246	15,536
Restricted cash	1,500	250
Cash, cash equivalents and restricted cash	<u>\$39,746</u>	<u>\$15,786</u>

Fair Value of Financial Instruments

ASC 820, Fair Value Measurement ("ASC 820"), establishes a fair value hierarchy for instruments measured at fair value that distinguishes between assumptions based on market data (observable inputs) and the Company's own assumptions (unobservable inputs). Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability and are developed based on the best information available in the circumstances.

ASC 820 identifies fair value as the exchange price, or exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As a basis for considering market participant assumptions in fair value measurements, ASC 820 establishes a three-tier fair value hierarchy that distinguishes between the following:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs are unobservable inputs that reflect the Company's own assumptions about the assumptions market participants would use in pricing the asset or liability.

To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

An entity may choose to measure many financial instruments and certain other items at fair value at specified election dates. Subsequent unrealized gains and losses on items for which the fair value option has been elected will be reported in earnings. The Company did not elect to measure any additional financial instruments or other items at fair value.

Warrants to Purchase Convertible Preferred Stock

The Company accounts for warrant instruments that either conditionally or unconditionally obligate the issuer to transfer assets as liabilities regardless of the timing of the redemption feature or price, even though the underlying shares may be classified as equity. These warrants are subject to revaluation at each balance sheet

date, and any changes in fair value are recorded as a component of other income/(expense), until the earlier of their exercise or expiration or the completion of a liquidation event, at which time the warrant liability may be reclassified to stockholders' equity if the criteria for recording the warrant as an equity instrument are met. Per the terms of the warrants, upon completion of a qualified public offering, any unexercised warrants are converted into warrants to purchase common shares.

Property and Equipment

Property and equipment consists of computer hardware and software, furniture and fixtures, office equipment, research and lab equipment, and leasehold improvement recorded at cost. Lab equipment used in research and development activities is only capitalized when it has an alternative future use. These amounts are depreciated using the straight-line method over the estimated useful lives of the assets. Purchased assets that are not yet in service are recorded to construction-in-process and no depreciation expense is recorded. Once they are placed in service they are reclassified to the appropriate asset class.

A summary of the estimated useful lives is as follows:

Classification	Estimated Useful Life
Computer hardware	3 - 5 Years
Computer software	3 Years
Furniture and fixtures	7 Years
Research and lab equipment (new/used)	5 years / 3 years
Leasehold improvements	Lesser of asset life or remaining life of lease

Repairs and maintenance costs are expensed as incurred.

Impairment of Long-Lived Assets

The Company periodically evaluates property and equipment for impairment whenever events or changes in circumstances indicate that a potential impairment may have occurred. If such events or changes in circumstances arise, the Company compares the carrying amount of the long-lived assets to the estimated future undiscounted cash flows expected to be generated by the long-lived assets. If the estimated aggregate undiscounted cash flows are less than the carrying amount of the long-lived assets, an impairment charge, calculated as the amount by which the carrying amount of the assets exceeds the fair value of the assets, is recorded. The fair value of the long-lived assets is determined based on the estimated discounted cash flows expected to be generated from the long-lived assets. The Company has not recorded any such impairment charges during the years presented.

Deferred Rent

Certain of the Company's operating lease agreements include scheduled rent escalations over the lease term, as well as lease incentives. Rent expense is charged ratably over the life of the lease. Deferred rent consists of the difference between cash payments and the recognition of rent expense on a straight-line basis for the buildings the Company occupies. Lease incentives are recorded as a deferred rent liability and are amortized on a straight-line basis over the term of the lease as a reduction to rent expense.

Research and Development Costs

Research and development costs are expensed in the period incurred. Research and development expenses consist of both internal and external costs such as payroll, consulting, and manufacturing costs associated with the development of the Company's product candidates.

Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are deferred and capitalized. The capitalized amounts are expensed as the related goods are delivered or the services are performed.

The Company has and may continue to acquire the rights to develop and commercialize new product candidates from third parties. The upfront payments to acquire license, product or rights, as well as any future milestone payments, are immediately recognized as research and development expense provided that there is no alternative future use of the rights in other research and development projects. Any milestone payments made for Intellectual Property after regulatory approval, or that have alternative future use, are capitalized and amortized.

Income Taxes

The Company records deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the Company's financial statement carrying amounts and the tax bases of assets and liabilities and for loss and credit carryforwards using enacted tax rates expected to be in effect in the years in which the differences reverse. A valuation allowance is provided to reduce the net deferred tax assets to the amount that will more likely than not be realized. The Company determines whether it is more likely than not that a tax position will be sustained upon examination. If it is not more likely than not that a position will be sustained, none of the benefit attributable to the position is recognized. The tax benefit to be recognized for any tax position that meets the more-likely-than-not recognition threshold is calculated as the largest amount that is more than 50% likely of being realized upon resolution of the contingency. The Company accounts for interest and penalties related to uncertain tax positions as part of its provision for income taxes.

Stock-Based Compensation

The Company records stock-based compensation for options granted to employees and directors based on the grant date fair value of awards issued. The expense is recorded over the requisite service period, which is the vesting period, on a straight-line basis. The Company uses the Black-Scholes option-pricing model to determine the fair value of stock options. The determination of the fair value of stock options on the date of grant using an option-pricing model is affected by the Company's common stock price, as well as a number of other assumptions. The Company recognizes stock-based compensation, net of estimated forfeitures, over the vesting period of the grant.

The Company accounts for stock-based compensation arrangements with non-employees based upon the fair value of the consideration received or the equity instruments issued, whichever is more reliably measurable. The measurement date for non-employee awards is generally the date performance of services required from the non-employee is complete. Stock-based compensation costs for non-employee awards are recognized as services are provided, which is generally the vesting period, on a straight-line basis. The unvested portion of the stock options is subject to re-measurement over the vesting period.

Segments

The Company has one operating segment. The Company's chief operating decision maker, its Chief Executive Officer, manages the Company's operations on a consolidated basis for the purpose of allocating resources.

Net Loss per Share Attributable to Common Stockholders

Basic net loss per share is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period, without consideration for common stock equivalents. Net loss applicable to common stockholders is calculated by adjusting the net loss of the Company for cumulative preferred stock dividends. Diluted net loss per share applicable to common stockholders is calculated by adjusting weighted average shares outstanding for the dilutive effect of common stock equivalents outstanding for the period. For purposes of the dilutive net loss per share applicable to common stockholders calculation, convertible preferred stock, warrants, stock options, and unvested restricted stock are considered to be common stock equivalents but are excluded from the calculation of diluted net loss per share applicable to common stockholders, as their effect would be anti-dilutive; therefore, basic and diluted net loss per share applicable to common stockholders were the same for all periods presented.

Unaudited Pro Forma Net Loss per Share

Pro forma basic and diluted net loss per share has been computed to give effect to the conversion of all outstanding convertible preferred stock into shares of common stock. The unaudited pro forma net loss per share does not include the shares expected to be sold and related proceeds to be received from the initial public offering. The unaudited pro forma net loss per share for the twelve months ended December 31, 2017 was computed using the weighted-average number of shares of common stock outstanding, including the pro forma effect of the conversion of all outstanding shares of convertible preferred stock into shares of common stock, as if such conversion had occurred at the beginning of the period, or their issuance dates if later.

Recently Adopted Accounting Pronouncements

In November 2015, the FASB issued ASU 2015-17, *Balance Sheet Classification of Deferred Taxes* (“ASU 2015-17”). The guidance requires that all deferred tax assets and liabilities, along with any related valuation allowance, be classified as noncurrent on the balance sheet. This guidance was effective in the first annual period ending after December 15, 2016, and interim periods thereafter, on December 31, 2016 for public entities. For all entities other than public business entities, the guidance becomes effective for financial statements issued for annual periods beginning after December 15, 2017, and interim periods within annual periods beginning after December 15, 2018. Early adoption is permitted for all entities as of the beginning of an interim or annual reporting period. The Company has adopted ASU 2015-17 as of January 1, 2015. The adoption of ASU 2015-17 had no material impact on the Company’s consolidated financial statements and related disclosures.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230), Restricted Cash* (“ASU 2016-18”). The amendments of ASU 2016-18 were issued to address the diversity in classification and presentation of changes in restricted cash and restricted cash equivalents on the statement of cash flows which is currently not addressed under Topic 230. ASU 2016-18 would require an entity to include amounts generally described as restricted cash and restricted cash equivalents with cash and cash equivalents when reconciling the beginning of period and end of period total amounts on the statement of cash flows. This guidance is effective for annual reporting periods, and interim periods within those years, beginning after December 15, 2017, for public entities and no later than for annual reporting periods beginning after December 15, 2018, for non-public entities. Early adoption is permitted and the standard must be applied retrospectively. The Company adopted this standard as of January 1, 2017 retrospectively for all periods presented.

In January 2017, the FASB issued ASU 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business* (“ASU 2017-01”). This new standard clarifies the definition of a business and provides a screen to determine when an integrated set of assets and activities is not a business. The screen requires that when substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, the set is not a business. Early adoption is permitted. The Company adopted the requirements of ASU 2017-01 as of January 1, 2016 and applied the screen when evaluating the nature of the assets received in connection with the acquisition of Epiva in 2016. As a result of applying this screen the Company concluded that Epiva was not a business.

Accounting Pronouncements Issued and Not Adopted as of December 31, 2017

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) (“ASU 2014-09”), and further updated through ASU 2016-12 (“ASU 2016-12”), which amends the existing accounting standards for revenue recognition. ASU 2014-09 is based on principles that govern the recognition of revenue at an amount to which an entity expects to be entitled when products are transferred to customers. This guidance is effective for annual reporting periods, and interim periods within those years, beginning after December 15, 2017, for public entities and no later than for annual reporting periods beginning after December 15, 2018, for non-public entities. The new revenue standard may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of adoption. While the Company continues to assess all potential impacts under ASU 2014-09, it does not believe adopting the new revenue recognition standard will have a material impact on its consolidated financial statements as the Company is not yet generating revenues.

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In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)* (“ASU 2016-02”), which supersedes the guidance in former ASC 840, *Leases*. 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. 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. This guidance is effective for annual reporting periods, and interim periods within those years, beginning after December 15, 2018, for public entities and no later than for annual reporting periods beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020 for non-public entities. Early adoption is permitted for all entities. ASU 2016-02 is expected to impact the Company’s consolidated financial statements as the Company has certain operating lease arrangements for which the Company is the lessee. Management is currently evaluating the impact the adoption of ASU 2016-02 will have on its consolidated financial statements and related disclosures.

In March 2016, the FASB issued ASU 2016-09, *Improvements to Employee Share-based Payment Accounting* (“ASU 2016-09”). ASU 2016-09 simplifies several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. Some of the areas of simplification apply only to non-public companies. This guidance was effective on December 31, 2016 for public entities. For entities other than public business entities, the amendments are effective for annual periods beginning after December 15, 2017, and interim periods within annual periods beginning after December 15, 2018. Early adoption is permitted for an entity in any interim or annual period for which financial statements have not been issued or made available for issuance. An entity that elects early adoption must adopt all amendments in the same period. The Company has not early adopted ASU 2016-09. The Company is currently evaluating the impact the adoption of ASU 2016-09 will have on its consolidated financial statements and related disclosures.

In May 2017, the FASB issued ASU 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. This guidance is effective for annual reporting periods, and interim periods within those years, beginning after December 15, 2017, for both public entities and non-public entities. Early adoption is permitted. The Company is currently evaluating the impact of adopting this standard on the consolidated financial statements and related disclosures, but does not expect it to have a significant impact.

3. Fair Value Measurements

The following tables present information about the Company’s financial assets and liabilities that have been measured at fair value as of December 31, 2017 and 2016:

Description	December 31, 2017	Active Markets (Level 1)	Observable Inputs (Level 2)	Unobservable Inputs (Level 3)
Assets:				
Money market funds	\$ 25,042	\$25,042	\$ —	\$ —
Total	\$ 25,042	\$25,042	\$ —	\$ —
Liabilities:				
Preferred Stock Warrant Liability	\$ 424	\$ —	\$ —	\$ 424
Total	\$ 424	\$ —	\$ —	\$ 424

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Description	December 31, 2016	Active Markets (Level 1)	Observable Inputs (Level 2)	Unobservable Inputs (Level 3)
Assets:				
Money market funds	\$ 14,839	\$14,839	\$ —	\$ —
Total	\$ 14,839	\$14,839	\$ —	\$ —
Liabilities:				
Preferred Stock Warrant Liability	\$ 123	\$ —	\$ —	\$ 123
Total	\$ 123	\$ —	\$ —	\$ 123

The Preferred Stock Warrant Liabilities (the Warrants) relate to warrants to purchase convertible preferred stock issued by the Company in connection with entering into a debt facility transactions during 2015 and 2016 as well as assuming warrants to purchase convertible preferred stock in connection with the acquisition of Epiva. These Warrants are considered a Level 3 liability since their fair value measurements are based, in part, on significant inputs not observed in the market and reflect the Company's assumptions as to the fair value of the underlying convertible preferred stock and the expected volatility of the Company's convertible preferred stock, as well as estimates regarding the number of shares that the Warrants will be exercisable for.

The estimated fair value of the Warrants was determined using the Black- Scholes option-pricing model. A significant input to the fair value of the Warrants is the fair value of the Series A Preferred Stock, Series A-1 Preferred Stock and Series A-3 Preferred Stock. The fair value of the Warrants is remeasured at each reporting date using then-current assumptions with changes in fair value charged to other expense on the statements of operations. As of December 31, 2017 and 2016, the Warrants were valued at \$424, and \$123, respectively and included in other non-current liabilities on the consolidated balance sheet. The assumptions used represent the Company's best estimates at the time of valuation. Changes in these estimates could result in material changes to the carrying value of the Warrants. The following assumptions were used in valuing the material Warrants:

	December 31,	
	2017	2016
Risk-free interest rate	2.3 - 2.4%	2.4 - 2.5%
Expected dividend yield	0.0%	0.0%
Expected term (in years)	7.9 - 8.6	8.9 - 9.6
Expected volatility	81 - 82%	79%
Fair value of preferred stock	\$2.41 - \$2.56	\$0.60 - 1.20

The following table provides a roll-forward of the fair value of the warrant liability measured at fair value on a recurring basis using Level 3 significant unobservable inputs (in thousands):

	Warrant Liability
Balance at December 31, 2015	\$ 46
Issuance and assumption of warrant to purchase convertible preferred stock	57
Change in fair value of warrant liability	20
Balance at December 31, 2016	\$ 123
Change in fair value of warrant liability	301
Balance at December 31, 2017	\$ 424

The estimated fair value of long-term debt approximates its carrying value as the effective interest rate approximates market rates. The fair value of long-term debt, which may differ from its carrying value, is determined by market interest rates from debt arrangements which are observed in market trading which are similar to the Company's arrangement and are considered a Level 2 input.

4. Acquisition with Epiva Biosciences, Inc. (Epiva)

On June 16, 2016 the Company acquired Epiva, a privately held research company, focused on microbes for inflammatory diseases in order to create synergies and expand the depth of the Company's research platform. Epiva held intellectual property rights related to microbes affecting the inflammatory diseases. The acquisition resulted in the exchange of all shares of Epiva stock for shares of the Company's stock at an exchange rate of 1-for-0.8333. The holders of Epiva common stock and common stock options received shares of the Company's common stock or options. The holders of Epiva Series A and A-2 Preferred Stock received shares of the Company's Series A-1 and A-3 Preferred Stock, respectively.

Both the Company and Epiva received funding from various investment funds that are managed by the same entity. The Company assessed the ownership structure of the two companies as well as the investment funds and determined, based on the ownership structure and other rights provided through other relevant arrangements, such as voting rights agreements, limited partnership agreements and general partnership agreements, that the ultimate controlling parent of each of the Company and Epiva was the same entity both immediately before and immediately after the acquisition. As a result, the Company and Epiva were considered to be under common control and the transaction was considered to be a related party transaction.

The net assets received by the Company as a result of the acquisition were determined to represent an asset and not a business. This conclusion was primarily based on the fact that substantially all of the fair value of the gross assets received, excluding cash acquired, related to Epiva's intellectual property rights. This conclusion considered the nature of Epiva's operations immediately prior to the acquisition as well as Epiva's limited operating history.

As the acquisition was considered to represent an asset acquisition under common control, the assets and liabilities received were initially recorded by the Company at Epiva's carrying value on the date of acquisition. The operations associated with the assets received from Epiva are presented within the statements of operations on a prospective basis from the date of the acquisition.

Assets and liabilities received from Epiva as of June 16, 2016 (at the historical carrying value of Epiva) are as follows:

Assets:	
Cash and cash equivalents	\$10,411
Prepaid expenses and other current assets	156
Property and equipment, net	406
Other assets	71
Total assets	<u>\$11,044</u>
Liabilities:	
Accounts payable	\$ 438
Accrued expenses	74
Long-term debt, net of debt discount	2,923
Other noncurrent liabilities	64
Total liabilities	<u>\$ 3,499</u>

5. Property and Equipment, Net

Property and equipment consists of the following:

	December 31,	
	2017	2016
Property and equipment:		
Lab equipment	\$ 3,189	\$1,562
Leasehold improvements	1,334	1,306
Furniture and fixtures	217	127
Computers and software	77	68
Office equipment	9	9
Construction-in-process	99	27
Property and equipment	4,925	3,099
Less: accumulated depreciation	(1,429)	(595)
Property and equipment, net	<u>\$ 3,496</u>	<u>\$2,504</u>

The Company recognized \$834 and \$495 of depreciation expense for the years ended December 31, 2017 and 2016.

6. Accrued Expenses

Accrued expenses consists of the following:

	December 31,	
	2017	2016
Accrued external research and development expenses	\$ 715	\$164
Accrued payroll and related expenses	256	130
Accrued professional fees	1,081	132
Accrued other	147	15
Total accrued expenses	<u>\$2,199</u>	<u>\$441</u>

7. Loan and Security Agreement

In November 2015, the Company entered into a loan and security agreement with a financial institution. The arrangement allowed the Company to borrow up to \$4,000 and, if certain criteria were met, to borrow up to an additional \$1,500. The Company drew \$4,000 under the facility in the first half of 2016 and repaid these amounts in 2016. In connection with this arrangement, the Company issued a warrant that was originally exercisable into 100,000 shares of Series A Preferred Stock. The warrant was initially recorded at fair value and subsequently marked-to-market through the statements of operations. The issuance costs were expensed in 2016 upon the repayment of the loan.

In connection with the acquisition of Epiva, the Company assumed Epiva's credit facility (the Credit Facility) and the related \$3,000 of outstanding debt. Subsequent to the acquisition, the Company amended the Credit Facility to allow the Company to borrow up to \$15,000, including the \$3,000 that was outstanding on the modification date and extending the maturity to August 15, 2020. During 2016, the Company borrowed an additional \$7,000, bringing the total amounts outstanding as of December 31, 2016 and 2017 to \$10,000. Under the terms of the Credit Facility the Company is required to make interest only payments through August 15, 2018. Upon the expiration of the interest only period, amounts borrowed will be repaid over 24 equal monthly payments of principal plus interest accrued through August 15, 2020. The amounts outstanding under the facility have an interest rate of the higher of (i) prime plus 0.25% or (ii) 3.75% per annum. The loan is secured by a lien on all Company assets, excluding intellectual property.

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The Company has the following minimum aggregate future loan payments at December 31, 2017 as adjusted for the impact of the additional draw in February 2018 as discussed below:

2018	\$ 475
2019	2,337
2020	5,271
2021	3,165
Total minimum payments	\$ 11,248
Less amounts representing interest and discount	(1,282)
Less current portion	—
Long-term debt, net of current portion	<u>\$ 9,966</u>

The Credit Facility contains negative covenants restricting the Company's activities, including limitations on cash deposits, dispositions, mergers or acquisitions, incurring indebtedness or liens, paying dividends or making investments and certain other business transactions. There are no financial covenants associated with the agreement. The obligations under the agreement are subject to acceleration upon the occurrence of specified events of default, including a material adverse change in the Company's business, operations or financial or other condition. The Company has determined that the risk of subjective acceleration under the material adverse events clause is remote and therefore has classified the outstanding principal in non-current liabilities based on scheduled principal payments.

Interest expense for the year ending December 31, 2017 and 2016 was \$474 and \$316, respectively.

In February 2018, the Company drew the additional \$5,000 available under the Credit Facility. This resulted in a increase to the interest rate to the higher of (i) prime plus 0.25% or (ii) 4.50% per annum. The interest only payment period was extended through to August 15, 2019. Upon the expiration of the interest only period, amounts borrowed will be repaid over 24 equal monthly payments of principal plus interest accrued through August 15, 2021. As such, the entire debt obligation has been classified as long-term on the Company's consolidated balance sheet. The Company may prepay the outstanding loan at its option with a prepayment fee of 2% of principal amount if prepayment is made before August 15, 2018 or 0.5% if the prepayment is made between August 15, 2018 and August 15, 2019.

In conjunction with the February 2018 drawdown, the Company issued a warrant to purchase up to 34,722 shares of the Company's Series B preferred stock at an exercise price of \$1.80 per share.

As part of this loan and security agreement, in the event of a liquidation event, including initial public offering, the Company will be required to pay a success fee of \$250.

8. License Agreements

Mayo Foundation for Medical Education and Research

On June 10, 2016, the Company entered into a Research and License Agreement, (the "2016 Mayo License Agreement") with Mayo Foundation for Medical Education and Research ("Mayo"). Under the Mayo License Agreement, Mayo was entitled to certain participation rights in connection with the issuance and sale of Series B Preferred Stock. The 2016 Mayo License Agreement allowed Mayo to purchase shares at the same price paid as other investors and is considered to be a fair value contract. In 2017, Mayo purchased 1,666,667 shares of Series B Preferred Stock at \$1.80 per share. Also pursuant to the 2016 Mayo License Agreement, Mayo received 2,000 shares of common stock upon the completion of certain project milestones as well as warrants to purchase common stock (the "Mayo Warrants") exercisable for 76 shares and 473 shares of common stock upon the completion of certain additional project milestones. The Mayo Warrants were fully vested and expensed in 2016.

On August 6, 2017, the Company and Mayo entered into a license agreement ("2017 Mayo License Agreement"). Under the 2017 Mayo License Agreement, Mayo granted the Company (i) an exclusive,

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worldwide, sublicensable license under Mayo's rights to certain intellectual property and microbial strains (ii) a non-exclusive, worldwide, sublicensable license to certain related know-how, in each case, to develop and commercialize certain microbial strains and licensed products incorporating any such strains. As consideration, the Company paid a nonrefundable upfront fee of \$225 and annual license maintenance fees. Nonrefundable upfront fees were expensed in full to research and development expense in 2016. Annual maintenance fees will be expensed as incurred over the term of the agreement. The Company may owe Mayo milestone payments upon the achievement of certain development, regulatory, and commercial milestones, up to a maximum of \$55,960 in the aggregate, as well as royalties on net sales of licensed products low single-digit percentages. No amounts are currently due under this agreement.

University of Chicago

On March 10, 2016, the Company and the University of Chicago entered into a patent license agreement ("2016 University of Chicago Agreement"). Under the 2016 University of Chicago Agreement, the University of Chicago granted the Company (i) an exclusive, royalty-bearing and sublicensable license under the Licensed Patents and (ii) a non-exclusive, royalty-bearing, sublicensable license to access the technical information to diligently develop and commercialize Licensed Products. As consideration, the Company paid a nonrefundable upfront fee of less than \$500 and annual license maintenance fees. Nonrefundable upfront fees were expensed in full to research and development expense in 2016. Annual maintenance fees will be expensed as incurred over the term of the agreement. The Company may owe the University of Chicago milestone payments upon the achievement of certain development, regulatory, and commercial milestones, as well as royalties on net sales of licensed products ranging from low to high single-digit percentages. In addition, the Company also agreed to pay the University of Chicago a share of sublicense revenue. No amounts are currently due under this agreement.

9. Commitments and Contingencies

Lease Obligations

The Company leases office and laboratory space under two separate operating leases that expire in 2020 and 2021, respectively. The leases require a security deposit, which the Company has met with a letter of credit from a financial institution that is secured with cash on deposit. The agreement provided for lease incentives in the form of a tenant improvement allowances of \$778 which is being amortized through February 2021, over the term of the leases. In December 2017, the Company extended one of the lease for additional two years to May 2020.

The Company recorded \$983 and \$493 of rent expense for the years ended December 31, 2017 and 2016, respectively.

The minimum aggregate future lease commitments at December 31, 2017, are as follows.

2018	\$ 997
2019	1,057
2020	798
2021	100
	<u>\$2,952</u>

In January 2018, the Company entered into an operating sublease arrangement to lease approximately 40,765 square feet for its office and research development space at 620 Memorial Drive, Cambridge, MA 02139 from February 2018 to September 2025, with annual rent payments ranging from approximately \$2,700 to \$3,200 over the term.

In January 2018, the Company also modified its existing operating lease to include a termination clause that will terminate one of the leases on June 30, 2018.

Compensation Commitment

The Company entered into a compensation arrangement with a consultant during May 2017 which provided for a future cash and a variable share payment in exchange for services. The services were completed in August 2017; however, the arrangement was not settled until after December 31, 2017. Subsequent to December 31, 2017, the Company settled the arrangement by making a cash payment and issuing 250,000 shares of Series B Preferred Stock. Accordingly, the Company recorded the liability related to this agreement at the fair value of the underlying shares at December 31, 2017, recognizing \$683 in expense.

10. Stockholders' (Deficit) Equity and Convertible Preferred Stock

As of December 31, 2017, the Company's issued and outstanding capital stock of the Company consisted of the following:

Common Stock

The Company has reserved the following shares of common stock as of December 31, 2017:

	December 31, 2017
Series A Preferred Stock	13,370,279
Series A Preferred Stock warrants	100,000
Series A-1 Preferred Stock	10,102,055
Series A-1 Preferred Stock warrants	62,497
Series A-2 Preferred Stock	5,833,334
Series A-3 Preferred Stock	8,749,650
Series A-3 Preferred Stock Warrants	31,248
Series B Preferred Stock	28,062,500
Mayo Clinic Warrants	549
Common stock options	14,021,447
Shares reserved under compensation plan	437,523
Total shares reserved	<u>80,771,082</u>

Convertible Preferred Stock

In 2016 the Company issued 833,334 shares of Series A Preferred Stock at a purchase price of \$0.60 per share for proceeds of \$500 and 5,833,334 shares of Series A-2 Preferred Stock at a purchase price of \$1.20 per share for proceeds of \$7,000.

The obligation for the investors to purchase shares of Series A-2 Preferred Stock upon the occurrence of certain events was considered a freestanding instrument and was therefore, required to be accounted for at fair value. However, because the purchase price of the Series A-2 Preferred Stock, approximated the fair value of the shares on the date of the purchase, the value attributed to the feature was determined to be immaterial.

In June 2016, in connection with the acquisition of Epiva, the Company issued 10,102,055 shares of Series A-1 Preferred Stock and 8,749,650 shares of Series A-3 Preferred Stock. The Series A-1 and A-3 preferred stock were issued in exchange for the outstanding shares of Epiva Series A and A-1 preferred stock, respectively, at an exchange rate of 1-for-0.8333. The Series A-1 and A-3 Preferred stock contained rights and preferences that were consistent with the rights and preferences of the historic Epiva preferred stock.

The Company issued a total of 27,777,778 shares of Series B Preferred Stock at purchase price of \$1.80 for gross proceeds \$50,000 in four separate closings in the first half of 2017. The terms of the Series B Preferred

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Stock modified certain terms of the existing Series A, A-1, A-2, and A-3 Preferred Stock. The amendments include removing certain redemption rights and allowing the Series B Preferred Stock to vote as part of the class of preferred stockholders. The amendments representing a modification of the Series A, A-1, A-2, and A-3 Preferred Stock. The Company concluded the modification did not result in incremental value to the shareholders and as such no incremental expense was recorded. Based on the removal of the redemption rights, the Company concluded that it was no longer probable that the Series A, A-1, A-2 and A-3 shares would become redeemable. As such, the Company ceased accreting these amounts to their redemption value each reporting period.

At December 31, 2017, convertible preferred stock consisted of the following:

	Shares Authorized	Shares Issued and Outstanding	Issuance Price per Share	Carrying Value	Liquidation Preference	Cumulative Convertible Preferred Stock Dividends
Series A Preferred	13,470,279	13,370,279	\$ 0.60	\$ 8,936	\$ 9,681	\$ 1,659
Series A-1 Preferred	10,164,552	10,102,055	0.60	6,712	7,218	1,157
Series A-2 Preferred	5,833,334	5,833,334	1.20	7,287	7,866	870
Series A-3 Preferred	8,780,898	8,749,650	1.20	10,960	11,831	1,337
Series B Preferred	28,062,500	27,777,778	1.80	49,807	53,379	3,379
	<u>66,311,563</u>	<u>65,833,096</u>		<u>\$83,702</u>	<u>\$ 89,975</u>	<u>\$ 8,402</u>

At December 31, 2016, convertible preferred stock consisted of the following (in thousands, except share and per share amounts):

	Shares Authorized	Shares Issued and Outstanding	Issuance Price per Share	Carrying Value	Liquidation Preference	Cumulative Convertible Preferred Stock Dividends
Series A Preferred	13,470,279	13,370,279	\$ 0.60	\$ 8,904	\$ 8,940	\$ 919
Series A-1 Preferred	10,164,552	10,102,055	0.60	6,712	6,712	651
Series A-2 Preferred	5,852,084	5,833,334	1.20	7,287	7,287	287
Series A-3 Preferred	8,780,898	8,749,650	1.20	10,960	10,960	460
	<u>38,267,813</u>	<u>38,055,318</u>		<u>\$33,863</u>	<u>\$ 33,899</u>	<u>\$ 2,317</u>

The Series A, Series A-1, Series A-2, Series A-3 and Series B Preferred Stock have the following rights and preferences:

Conversion

The preferred stock is convertible into common stock at any time at the option of the holder, initially on a 1-for-1 basis, and is subject to mandatory conversion upon either (a) the closing of a firm commitment underwritten public offering pursuant to an effective registration statement with the Securities Act of 1933, resulting in gross proceeds of at least \$35,000 and for a price per share of at least \$3.50 or (b) upon the vote of a majority of the preferred stockholders. The conversion ratio may be adjusted for the occurrence of certain dilutive events.

Voting

The holders of the preferred stock have voting rights equivalent to the number of shares of common stock into which the preferred stock is convertible into. In addition, a majority of the preferred stockholders must approve certain items, including the approval of any dissolution, liquidation, amendment to the articles of incorporation, creation of new senior securities, payment of dividends, election of certain directors and adjusting the total number of directors, as well as other related items.

Dividends

Holders of shares of Series A, Series A-1, Series A-2, Series A-3 and Series B Preferred Stock are entitled to receive a cumulative dividend of 8% per annum, which shall accrue and compound on an annual basis. No dividends have been declared since the Company's inception. Dividends shall be payable only when, as, and if declared by the Board of Directors. No dividends can be paid to common stockholders until the preferred stockholders receive the greater of the cumulative dividends or the amount that would have been received if the preferred stock had been converted into common.

Liquidation

In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company or a deemed liquidation event, the holders of shares of preferred stock then outstanding are entitled to be paid out of the assets of the Company available for distribution to its stockholders, before any payment can be made to the holders of common stock, an amount per share equal to the greater of (i) the original issue price for the Series of preferred stock held plus any dividends accrued but unpaid, whether or not declared; or (ii) such amount per share as would have been paid if all shares of preferred stock had been converted to common stock immediately prior to such liquidation, dissolution, winding up or deemed liquidation event. If assets of the Company available are insufficient to pay holders of preferred stock the full amount they are entitled to, the holders of preferred stock will share ratably in any distribution of the assets available for distribution in proportion to the amounts due such holders. After the payment of all preferential amounts required to be paid to the holders of shares of preferred stock, the remaining assets of the Company will be distributed among the holders of the shares of common stock, pro rata based on the number of shares held by each such holder.

Redemption

Prior to the issuance of Series B Convertible Preferred Stock, all series of preferred stock became redeemable at specific dates. As such, the Company was accreting dividends on their preferred stock. Upon issuance of Series B Convertible Preferred Stock, all date certain redemption features were removed and the Company concluded that it was no longer probable that the preferred stock would become redeemable. As such, the Company stopped accreting dividends on their preferred stock in 2017.

Upon certain change in control events that are outside of the Company's control, including liquidation, sale or transfer of control of the Company, holders of the convertible preferred stock can cause its redemption. Shares of preferred stock must be redeemed by the Company at the original issue price for each series of preferred stock plus any dividends accrued but unpaid, whether or not declared, on the fifth month anniversary of such event, upon a written request from the holders of a majority of the then outstanding shares of preferred stock. This request can be made at any time before fourth month anniversary of such event.

The Company classifies its convertible preferred stock outside of stockholders' deficit as certain change in control events are outside the Company's control.

11. Stock Incentive Plan

In 2015, the Company adopted the 2015 Stock Incentive Plan, as amended ("2015 Plan"), which provides for grant of incentive stock options, non-qualified stock options, restricted stock awards, or RSAs, and other stock-based awards to the Company's employees, officers, directors, consultants and advisors for the purchase up to 4,000,000 shares of the Company's common stock. As of December 31, 2017, there are 14,458,970 shares of common stock reserved for the grant of awards under the 2015 Plan.

The terms of stock awards agreements, including vesting requirements, are determined by the board of directors and are subject to the provisions of the 2015 Plan. The stock options granted to employees generally

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vest over a four-year period but may be granted with different vesting terms. Certain awards contain performance-based vesting criteria and as of December 31, 2017 the Company has concluded the vesting of these awards is not probable. There are ten such awards to date. Certain options provide for accelerated vesting in the event of a change in control, as defined above. Awards granted to non-employee consultants generally vest monthly over a period of one to four years. Stock options may not be granted at less than the fair value of the Company's common stock on the date of grant, as determined in good faith by the Board of Directors at its sole discretion. Options granted under the Plan expire no more than 10 years from the date of grant.

As of December 31, 2017 and 2016, 437,523 and 411,937 shares of common stock were available for future grant under the 2015 Plan.

Stock-Based Compensation Expense

Stock-based compensation expense included in the Company's statements of operations is as follows:

	Year Ended December 31,	
	2017	2016
Research and development	\$ 849	\$ 205
General and administrative	693	214
Total stock-based compensation expense	<u>\$ 1,542</u>	<u>\$ 419</u>

Stock Options

A summary of the stock option activity under the 2015 Plan is as follows:

	Shares	Weighted Average - Exercise Price	Weighted Average - Remaining Contractual Life	Aggregate Intrinsic Value ⁽¹⁾ (in thousands)
Options outstanding at December 31, 2016	8,677,251	\$ 0.23	9.44	\$ 1,251
Granted	5,881,102	\$ 0.74		
Exercised	(435,061)	\$ 0.18		
Canceled	(1,153,735)	\$ 0.20		
Options outstanding at December 31, 2017	<u>12,969,557</u>	\$ 0.46	9.05	19,803
Exercisable as of December 31, 2017	<u>2,141,964</u>	\$ 0.23	8.49	3,764
Vested and expected to vest as of December 31, 2017	<u>11,009,676</u>	\$ 0.45	9.02	\$ 16,964

- (1) The aggregate intrinsic value of 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 ordinary shares as of the end of the period.

The Company had 10,827,593 unvested stock options outstanding as of December 31, 2017. The weighted-average fair value of options granted during the years ended December 31, 2017 and 2016 was \$1.20 and \$0.26, respectively.

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When utilizing the Black-Scholes option-pricing model to determine the grant date fair value of stock options granted to employees as well as the vesting or re-measurement date fair value for awards granted to non-employees, the Company used the following assumptions for options granted to employees and options granted to non-employees:

Employee option grants

	Year Ended December 31,	
	2017	2016
Risk-free interest rate	2.03%	1.33%
Expected life (in years)	6.18	5.66
Volatility	79.5%	87.2%
Expected dividend rate	0.00%	0.00%
Fair value of common stock	\$0.61 - 1.99	\$0.12 - 0.61

Expected Term: The expected term represents the period that the options granted are expected to be outstanding and is determined using the simplified method (based on the mid-point between the vesting date and the end of the contractual term). The expected life is applied to the stock option grant group as a whole as the Company does not expect substantially different exercise or post-vesting termination behavior among its employee population.

Expected Volatility: The Company used an average historical stock price volatility of comparable public companies within the biotechnology and pharmaceutical industry that were deemed to be representative of future stock price trends as the Company does not have any trading history for its common stock.

Risk-Free Interest Rate: The Company based the risk-free interest rate over the expected term of the options based on the constant maturity rate of U.S. Treasury securities with similar maturities as of the date of the grant.

Expected Dividend: The Company has not paid and does not anticipate paying any dividends in the near future. Therefore, the expected dividend yield was zero.

Fair Value of Underlying Common Stock: The Company determined the fair value of the underlying common stock based on input from management and approved by the Board of Directors, which utilized the valuation of the Company's enterprise value determined utilizing various methods including the back-solve method, the option-pricing method, or OPM, or a hybrid of the probability-weighted expected return method, or PWERM, and the OPM. The total enterprise value was then allocated to the various outstanding equity instruments, including the underlying common stock, utilizing the option-pricing model.

Non-employee option grants

	Year Ended December 31,	
	2017	2016
Risk-free interest rate	2.30%	2.35%
Expected life (in years)	9.43	9.51
Volatility	78.9%	89.0%
Expected dividend rate	0.00%	0.00%
Fair value of common stock	\$0.61 - 1.99	\$0.12 - 0.61

The Company estimates the expected life of options granted based on the remaining contractual term of the option for options granted to non-employees.

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On January 30, 2018, the Company issued 250,000 Series B Preferred Stock to a non-employee consultant as part of the consideration for the service performed and completed in 2017. The Company has recognized \$683 as general and administrative expense in the consolidated statement of operations.

As of December 31, 2017, total unrecognized stock-based compensation expense relating to unvested stock options was \$7,314. This amount is subject to change as the unvested portion of the stock options granted to non-employees is subject to re-measurement over the vesting period. This amount is expected to be recognized over a weighted average period of 1.98 years.

Restricted Stock

The Company permitted the early exercise of certain stock options prior to vesting by certain directors and officers. This practice ceased in 2017. Any shares issued pursuant to unvested options are restricted and subject to repurchase by the Company until the conditions for vesting are met. Accordingly, the Company has recorded the proceeds from the issuance of restricted stock as a liability in the consolidated balance sheets included as a component of other current and noncurrent liabilities based on the scheduled vesting dates. The amounts paid for shares purchased under an early exercise of stock options and subject to repurchase by the Company are reported in stockholders' (deficit) equity once those shares vest. Upon termination of employment of an option holder, the Company has the right to repurchase, at the original purchase price, any unvested restricted shares.

In 2016, there were 2,611,666 options exercised prior to vesting for total proceeds of \$238 to the Company. These exercises are not considered substantive for accounting purposes, and as such the related shares are treated as restricted share liabilities given the implicit repurchase feature. As of December 31, 2016, the Company has recognized restricted stock liability of \$158 as other noncurrent liabilities.

In connection with the acquisition of Epiva in June 2016, the Company issued shares of restricted stock to holders of restricted stock of Epiva at an exchange rate of 1-for-0.8333 for a total of 120,826 shares of restricted stock, of which 18,750 were repurchased by the Company.

There was no issuance or repurchase of restricted stock occurred in 2017.

The Company reclassified \$57 and \$67 to stockholders' deficit upon vesting of restricted shares during the year ended December 31, 2017 and 2016, respectively. The remaining proceeds related to the unvested options of \$102 as of December 31, 2017 will be reclassified to stockholders' deficit as the shares vest over a remaining weighted average vesting period of 1.55 years.

A summary of restricted stock activity is as follows:

	Shares	Weighted-Average Price
Outstanding at December 31, 2016	1,683,822	\$ 0.09
Vested	(631,921)	\$ 0.08
Outstanding at December 31, 2017	1,051,901	\$ 0.09

As of December 31, 2017, the Company had \$168 of unrecognized stock-based compensation expense related to its employee unvested restricted stock awards which is expected to be recognized over a remaining weighted average vesting period of 1.17 years.

12. Income Taxes

The Company has not recorded any net tax provision for the periods presented due to the losses incurred and the need for a full valuation allowance on net deferred tax assets. The difference between the income tax expense at the U.S. federal statutory rate and the recorded provision is primarily due to the valuation allowance provided on all deferred tax assets. The Company's loss before income tax for the periods presented was generated entirely in the United States:

	December 31,	
	2017	2016
U.S. federal tax statutory rate	34.0%	34.0%
State taxes, net of federal benefit	5.6%	5.7%
Non-deductible stock compensation	(1.0)%	(0.7)%
Other non-deductible expenses	(0.5)%	(0.3)%
Credits	0.8%	2.1%
Change in federal tax rate due to tax reform	(22.5)%	0.0%
Change in valuation allowance	(16.5)%	(40.6)%
Other	0.1%	(0.2)%
	<u>0.00%</u>	<u>0.00%</u>

	December 31,	
	2017	2016
Deferred tax assets:		
Net operating loss carryforwards	\$ 13,183	\$ 9,019
Research and development credits	1,175	701
Capitalized research and development, patent and start-up costs	241	331
Accrued expenses	267	351
Stock based compensation	217	56
Depreciation	(66)	(70)
Deferred tax assets before valuation allowance	15,017	10,388
Valuation allowance	(15,017)	(10,388)
Net deferred tax assets	<u>\$ —</u>	<u>\$ —</u>

On December 22, 2017, the Tax Cuts and Jobs Act (the Act) was enacted in the United States. The Act incorporates significant changes to U.S. corporate income tax laws including, among other things, a reduction in the statutory federal corporate income tax rate from 35% to 21%, an exemption for dividends received from certain foreign subsidiaries, a one-time repatriation tax on deemed repatriated earnings from foreign subsidiaries, eliminating the alternative minimum tax (AMT), immediate expensing of certain depreciable tangible assets, changing rules related to net operating loss carryforwards, and limitations on the deduction for net interest expense and certain executive compensation. In December 2017, the SEC issued SAB 118, which directs taxpayers to consider the impact of the U.S. legislation as "provisional" when it does not have the necessary information available, prepared or analyzed (including computations) in reasonable detail to complete its accounting for the change in tax law.

As of December 31, 2017, we have not completed our accounting for the tax effects of enactment of the Act. We 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 Company has no foreign earnings and therefore is not subject to transition tax. However, we are still analyzing certain aspects of the Act and refining our calculations, which could potentially affect the measurement of these balances or potentially give rise to new deferred tax amounts. The provisional amount recorded related to the remeasurement of our deferred tax balance was a \$6,300 provision that was offset by a valuation allowance.

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As of December 31, 2017, the Company had approximately \$50,171 and \$41,878 in federal and state Net Operating Losses (“NOLs”), respectively, which expire at various dates through 2037. As of December 31, 2017, the Company had federal and state research credits of \$764 and \$520, respectively, which begin to expire in 2030.

Realization of future tax benefits is dependent on many factors, including the Company’s ability to generate taxable income within the net operating loss carryforward period. Under the Internal Revenue Code provisions, certain substantial changes in the Company’s ownership, including the sale of the Company or significant changes in ownership due to sales of equity, have limited and may limit in the future, the amount of net operating loss carryforwards which could be used annually to offset future taxable income. The Company has not yet completed an analysis of ownership changes. The Company may also experience ownership changes in the future as a result of subsequent shifts in our stock ownership, some of which may be outside the Company’s control. As a result, the Company’s ability to use our pre-change NOLs to offset U.S. federal taxable income may be subject to limitations, which could potentially result in increased future tax liability to the Company. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed. All NOLs generated post tax reform will have an indefinite life, are not subject to carryback provisions and limited to 80% of income in any year.

The Company has evaluated the positive and negative evidence bearing upon its ability to realize the deferred tax assets. Management has considered the Company’s history of cumulative net losses incurred since inception and its lack of commercialization of any products or generation of any revenue from product sales since inception and has concluded that it is more likely than not that the Company will not realize the benefits of the deferred tax assets. Accordingly, a full valuation allowance has been established against the net deferred tax assets as of December 31, 2017 and 2016, respectively. The valuation allowance increased by \$4,628 in 2017, primarily due to increases in net operating losses and research and development credits offset by the impact of the Act. The valuation allowance increased by \$8,577 in 2016, primarily due to increases in net operating losses and research and development credits and tax attributes acquired from Epiva. Management reevaluates the positive and negative evidence at each reporting period.

As of December 31, 2017 and 2016, the Company had no unrecognized tax benefits, respectively. Interest and penalty charges, if any, related to unrecognized tax benefits would be classified as income tax expense. The Company does not expect any significant change in its uncertain tax positions in the next twelve months.

13. Pro Forma Net Loss Per Share (unaudited)

The following table sets forth the computation of the Company’s unaudited pro forma basic and diluted net loss per share:

	Year Ended December 31, 2017 (unaudited)
Numerator:	
Net loss	\$ (28,047)
Remeasurement of warrant to purchase convertible preferred stock	301
Net loss attributable to common stockholders	<u>\$ (27,746)</u>
Denominator:	
Weighted average common shares outstanding - basic and diluted	15,299,527
Pro form adjusted to reflect automatic conversion of convertible preferred shares upon the closing of the proposed initial public offering	<u>61,418,333</u>
Pro forma weighted average common shares outstanding - basic and diluted	<u>76,717,860</u>
Pro forma net loss per share attributable to common stockholders - basic and diluted	<u>\$ (0.36)</u>

In January 2018, the Company issued additional 250,000 Series B preferred shares to non-employees. In February 2018, the Company issued 14,705,884 Series C preferred shares through financing, as discussed in note 15 below, resulting in a total of 14,955,884 additional convertible preferred shares (as converted to common shares).

14. Related Party Transactions

In 2016 and 2017, the Company has entered into various research and in-license agreements with Mayo Foundation for Medical Education and Research, which is wholly owned by one of the Company's investors. The Company incurs research and development expenses under these arrangements. See Note 8, License Agreements, for details of the agreements.

The Company entered into an employment agreement with Duncan McHale, an executive officer of Weatherden Ltd ("Weatherden"), a United Kingdom based clinical development consulting firm, as of December 15, 2017. Pursuant to the terms of the agreement, the Company has agreed to pay Mr. McHale £225 per year to serve as the Company's Chief Medical Officer. Prior to the employment agreement, the Company received clinical advisory services from Mr. McHale through a supply of service agreement with Weatherden. During the years ended December 31, 2017 and 2016, the Company paid Weatherden \$305 and \$0, respectively. As of December 31, 2017, the amount due to Weatherden under the supply of service agreement was \$161, which was fully paid subsequent to December 31, 2017.

In May 2014, the Company entered into a services agreement with Flagship Ventures Management, Inc., an affiliate of one of its stockholders, Flagship Venture Funds, to provide general and administrative services to the Company, including the employer portions of employee health and dental benefit plans for Evelo Biosciences employees and consulting services. The Company made payments under the agreement of \$8 and \$209 during the years ended December 31, 2017 and 2016 respectively. As of December 31, 2017, the amount due to Flagship Ventures Management, Inc. related to the services agreement was \$2.

15. Subsequent Events

Series C Convertible Preferred Stock

In February 2018, the Company sold 14,705,884 shares of Series C convertible preferred stock at a price of \$3.23 per share for gross proceeds of \$47,500. In connection with this financing, the Company amended and restated its certificate of incorporation to reflect that the holders of preferred stock are entitled to receive dividends, if and when declared by the Board of Directors, at the rate of 8.0% per share per annum, and to establish the Series C original issuance price at \$3.23 per share, both subject to adjustment in the event of a stock split, combination, common stock dividend or distribution, reclassification, exchange, substitution, or reorganization. The amendments provided for rights, preferences and privileges for the Series C convertible preferred stock similar to those of convertible preferred stock described in Note 10, Stockholders' (Deficit) Equity and Convertible Preferred Stock.

Clinical Trial Agreement

On February 15, 2018, the Company and the University of Surrey entered into a Clinical Trial Agreement for an industry sponsored research (the "Surrey Agreement"), in which the University of Surrey agreed to conduct a proof of concept clinical trial of EDP1066 on healthy volunteer and patients with mild to moderate psoriasis and atopic dermatitis. In connection with the Surrey Agreement, as consideration, the Company agreed to a total of £1,052 with 10% due on the effective date of the agreement. The remaining total consideration will be due upon the completion of the milestones outlined in the agreement.

Exclusivity and Commitment Agreement with Biose Industrie

On February 15, 2018, the Company entered into an Exclusivity and Commitment Agreement with Biose Industrie (“Biose”), a French corporation, in which Biose agrees to exclusively manufacture certain microbial biotherapeutic products for the Company and reserve for the Company’s agreed manufacturing resources to conduct manufacturing runs for such products. Under the terms of this agreement, the Company agreed to a yearly payment of \$250 as exclusivity fees and a set minimum number manufacturing run per year.



Part II**INFORMATION NOT REQUIRED IN PROSPECTUS****Item 13. Other Expenses of Issuance and Distribution.**

The following table indicates the expenses to be incurred in connection with the offering described in this registration statement, other than underwriting discounts and commissions, all of which will be paid by us. All amounts are estimated except the Securities and Exchange Commission registration fee, the Financial Industry Regulatory Authority, Inc., or FINRA, filing fee and the Nasdaq listing fee.

	<u>Amount</u>
Securities and Exchange Commission registration fee	\$ *
FINRA filing fee	*
Initial listing fee	*
Accountants' fees and expenses	*
Legal fees and expenses	*
Blue Sky fees and expenses	*
Transfer Agent's fees and expenses	*
Printing and engraving expenses	*
Miscellaneous	*
Total expenses	<u>\$ *</u>

* To be filed by amendment.

Item 14. Indemnification of Directors and Officers.

Section 102 of the General Corporation Law of the State of Delaware permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our restated certificate of incorporation provides that no director of the Registrant shall be personally liable to it or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the General Corporation Law of the State of Delaware prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the General Corporation Law of the State of Delaware provides that a corporation has the power to indemnify a director, officer, employee, or agent of the corporation, or a person serving at the request of the corporation for another corporation, partnership, joint venture, trust or other enterprise in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he was or is a party or is threatened to be made a party to any threatened, ending or completed action, suit or proceeding by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Our restated certificate of incorporation provides that we will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than an action by or in the right of us) by reason of the fact that he or she is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an "Indemnitee"), 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 in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. Our restated certificate of incorporation provides that we will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of us to procure a judgment in our favour by reason of the fact that the Indemnitee is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to us, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by us against all expenses (including attorneys' fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances.

We intend to enter into indemnification agreements with each of our directors and executive officers. These indemnification agreements may require us, among other things, to indemnify our directors and executive officers to the fullest extent permitted by Delaware law, including indemnification of expenses such as attorneys' fees, judgments, fines and settlement amounts incurred by the director or executive officer in any action or proceeding, including any action or proceeding by or in right of us, arising out of the person's services as a director or executive officer.

We maintain a general liability insurance policy that covers certain liabilities of directors and officers of our corporation arising out of claims based on acts or omissions in their capacities as directors or officers.

In any underwriting agreement we enter into in connection with the sale of common stock being registered hereby, the underwriters will agree to indemnify, under certain conditions, us, our directors, our officers and persons who control us within the meaning of the Securities Act of 1933, as amended, or the Securities Act, against certain liabilities.

Item 15. Recent Sales of Unregistered Securities.

Set forth below is information regarding shares of capital stock issued by us within the past three years. Also included is the consideration received by us for such shares and information relating to the section of the Securities Act, or rule of the Securities and Exchange Commission, under which exemption from registration was claimed.

(a) Issuance of Capital Stock.

From June 29, 2015 through December 8, 2016, the registrant issued an aggregate of 11,666,668 shares of Series A Preferred Stock for aggregate consideration of \$7.0 million and 1,703,611 shares of Series A Preferred

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Stock in converted promissory notes upon the cancellation of principal debt totalling \$1.0 million principal plus \$22,167 accrued interest to accredited investors, (ii) 10,102,055 shares of Series A-1 Preferred Stock for an aggregate consideration of \$6.1 million to accredited investors, (iii) 5,833,334 shares of Series A-2 Preferred Stock for an aggregate consideration of \$7.0 million to accredited investors, (iv) 8,749,650 shares of Series A-3 Preferred Stock for an aggregate consideration of \$10.5 million to accredited investors, all pursuant to Section 4(a)(2) of the Securities Act and Rule 506 as transactions not involving a public offering.

From January 5, 2017 through January 30, 2018, the registrant issued an aggregate of 28,027,778 shares of Series B Preferred Stock for aggregate consideration of \$50.5 million, including \$450,000 of consulting services rendered, to accredited investors pursuant to Section 4(a)(2) of the Securities Act and Rule 506 as transactions not involving a public offering.

On February 9, 2018, the registrant issued 14,705,884 shares of Series C Preferred Stock for aggregate consideration of \$47.5 million to accredited investors pursuant to Section 4(a)(2) of the Securities Act and Rule 506 as a transaction not involving a public offering.

(b) Equity Grants.

From June 8, 2015 to January 25, 2018, the registrant granted stock options to purchase an aggregate of 18,485,182 shares of its common stock with exercise prices ranging between \$0.001 and \$0.97 per share, and 120,826 shares of restricted common stock to employees, non-employees, and directors in connection with services provided to the registrant by such parties pursuant to Section 4(a)(2) and Rule 701 of the Securities Act as transactions not involving a public offering.

(c) Warrants.

From November 13, 2015 to March 21, 2016, the registrant issued warrants to purchase an aggregate of 100,000 shares of Series A preferred stock at an exercise price of \$0.60 per share to Comerica Bank pursuant to Section 4(a)(2) of the Securities Act as transactions not involving a public offering.

On June 10, 2016, the registrant issued a warrant to purchase common stock at an exercise price of \$0.01 per share to Mayo Foundation for Medical Education and Research pursuant to Section 4(a)(2) of the Securities Act as a transaction not involving a public offering. The warrant is currently exercisable for an aggregate of 549 shares of common stock.

On August 15, 2016, the registrant issued warrants to purchase an aggregate of (i) 62,497 shares of Series A-1 preferred stock at an exercise price of \$0.60 per share and (ii) 31,248 shares of Series A-3 preferred stock at an exercise price of \$1.20 per share to Pacific Western Bank pursuant to Section 4(a)(2) of the Securities Act as transactions not involving a public offering.

On February 7, 2018, the registrant issued warrants to purchase an aggregate of 34,722 shares of Series B preferred stock at an exercise price of \$1.80 per share to Pacific Western Bank pursuant to Section 4(a)(2) of the Securities Act as transactions not involving a public offering.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

<u>Exhibit Number</u>	<u>Description of Exhibit</u>
1.1*	Form of Underwriting Agreement
3.1	Amended and Restated Certificate of Incorporation of the Registrant, as amended (currently in effect)
3.2	Bylaws of the Registrant (currently in effect)
3.3*	Form of Restated Certificate of Incorporation of the Registrant (to be effective upon the closing of this offering)
3.4*	Form of Amended and Restated Bylaws of the Registrant (to be effective upon the closing of this offering)
4.1	Fourth Amended and Restated Investors' Rights Agreement, dated February 9, 2018, by and among the Registrant and the investors named therein
4.2*	Specimen Stock Certificate evidencing the shares of common stock
4.3	Common Stock Purchase Warrant issued to Mayo Foundation for Medical Education and Research, dated June 10, 2016
4.4	Warrant to Purchase Stock issued to Comerica Bank, dated November 13, 2015, to purchase Series A preferred stock
4.5	Amended and Restated Warrant to Purchase Stock issued to Pacific Western Bank, dated August 15, 2016, to purchase Series A-1 preferred stock
4.6	Warrant to Purchase Stock issued to Pacific Western Bank, dated August 15, 2016, to purchase Series A-3 preferred stock
4.7	Second Warrant to Purchase Stock issued to Pacific Western Bank, dated February 7, 2018, to purchase Series B preferred stock
5.1*	Opinion of Latham & Watkins LLP
10.1#	2015 Stock Incentive Plan, as amended through December 27, 2017, and forms of agreements thereunder
10.2#*	2018 Incentive Award Plan and forms of agreements thereunder
10.3#*	2018 Employee Stock Purchase Plan and forms of agreements thereunder
10.4#*	Non-Employee Director Compensation Program
10.5#*	Form of Indemnification Agreement for Directors and Officers
10.6	Lease between the Registrant and 620 Memorial Leasehold LLC, dated July 14, 2015, as amended on January 24, 2018
10.7*	Sublease Agreement between the Registrant and Bio-Rad Laboratories, Inc., dated December 27, 2017
10.8#*	Employment Agreement between the Registrant and Mark Bodmer, Ph.D. (to be effective upon the closing of this offering)

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10.9#*	Employment Agreement between the Registrant and Balkrishan (Simba) Gill, Ph.D. (to be effective upon the closing of this offering)
10.10#*	Employment Agreement between the Registrant and Duncan McHale, M.D., Ph.D. (to be effective upon the closing of this offering)
10.11#*	Offer Letter between the Registrant and Mark Bodmer, Ph.D., dated October 6, 2015
10.12#*	Offer Letter between the Registrant and Balkrishan (Simba) Gill, Ph.D., dated June 25, 2015
10.13#*	Employment Agreement between the Registrant and Duncan McHale, M.D., Ph.D., dated December 15, 2017
10.14*	Agreement for the Supply of Services, dated January 1, 2017, as amended on July 22, 2017, between the Registrant and Weatherden Ltd.
10.15†*	Patent License Agreement between Mayo Foundation for Medical Education and Research and the Registrant, dated August 6, 2017
10.16†*	Exclusive License Agreement between The University of Chicago for an Immuno-oncology Technology and the Registrant, dated March 10, 2016
10.17*	Loan and Security Agreement between Pacific Western Bank and the Registrant, dated August 15, 2016, as amended on June 14, 2017, August 18, 2017 and February 7, 2018
21.1	Subsidiaries of the Registrant
23.1*	Consent of Ernst & Young LLP
23.2*	Consent of Latham & Watkins LLP (included in Exhibit 5.1)
24.1	Power of Attorney (included on signature page)

* To be filed by amendment.

Indicates management contract or compensatory plan.

† Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment pursuant to Rule 406 under the Securities Exchange Act of 1933.

(b) Financial Statement Schedules. Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the audited consolidated financial statements or notes thereto.

Item 17. Undertakings.

The undersigned registrant hereby undertakes to provide to the underwriter, at the closing specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriter 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 Securities and Exchange Commission 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 undersigned hereby undertakes that:

- (1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a 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.

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, Commonwealth of Massachusetts, on this day of , 2018.

EVELO BIOSCIENCES, INC.

By: _____
Balkrishan (Simba) Gill, Ph.D.
President and Chief Executive Officer

SIGNATURES AND POWER OF ATTORNEY

We, the undersigned officers and directors of Evelo Biosciences, Inc., hereby severally constitute and appoint Balkrishan (Simba) Gill, Ph.D. and _____, and each of them singly (with full power to each of them to act alone), our true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution in each of them for him or her and in his or her name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement (or any other registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as full to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their, his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities held on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
_____ Balkrishan (Simba) Gill, Ph.D.	President, Chief Executive Officer and Director (principal executive officer, principal financial officer and principal accounting officer)	, 2018
_____ Noubar B. Afeyan, Ph.D.	Chairman of the Board of Directors	, 2018
_____ Lord Ara Darzi	Director	, 2018
_____ David R. Epstein	Director	, 2018
_____ Theodore Melas-Kyriazi	Director	, 2018
_____ David P. Perry	Director	, 2018

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
EVELO BIOSCIENCES, INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

Evelo Biosciences, 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:

1. That the name of this corporation is Evelo Biosciences, Inc., and that this corporation was originally incorporated pursuant to the General Corporation Law on May 6, 2014, under the name VL28, Inc.

2. That the Board of Directors duly adopted resolutions proposing to amend and restate the Amended and Restated 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 Amended and Restated Certificate of Incorporation of this corporation, as amended to date, be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Evelo Biosciences, Inc. (the “**Corporation**”).

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, Zip Code 19801. The name of its registered agent at such address is The Corporation Trust Company.

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.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 124,300,000 shares of Common Stock, \$0.001 par value per share (“**Common Stock**”), and (ii) 89,531,378 shares of Preferred Stock, \$0.001 par value per share (“Preferred Stock”), of which 13,470,279 shares are hereby designated “Series A Preferred Stock,” 10,164,552 shares are hereby designated “Series A-1 Preferred Stock,” 5,833,334 shares are hereby designated “Series A-2 Preferred Stock,” 8,780,898 shares are hereby designated “Series A-3 Preferred Stock,” 28,062,500 shares are hereby designated “Series B Preferred Stock,” and 23,219,815 shares are hereby designated “Series C Preferred Stock.”

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); 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 the Certificate of Incorporation that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to the Certificate of Incorporation or pursuant to the General Corporation Law. 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.

B. PREFERRED STOCK

The Series A Preferred Stock, Series A-1 Preferred Stock, Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series B Preferred Stock and Series C Preferred Stock shall have the following rights, preferences, powers, privileges and restrictions, qualifications and limitations. 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.

From and after the date of the issuance of any shares of Series A Preferred Stock, dividends at the rate per annum of eight percent (8%) of the sum of the Series A Original Issue Price (as defined below), plus the amount of previously accrued dividends per share, which shall compound on an annual basis, shall accrue on each share of Series A Preferred Stock (subject, in the case of the Series A Original Issue Price, to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock) (the “**Series A Accruing Dividends**”). From and after the date of the issuance of any shares of Series A-1 Preferred Stock, dividends at the rate per annum of eight percent (8%) of the sum of the Series A-1 Original Issue Price (as defined below) plus \$0.03880, plus the amount of previously accrued dividends per share, which shall compound on an annual basis, shall accrue on each share of Series A-1 Preferred Stock (subject, in the case of the Series A-1 Original Issue Price, to appropriate adjustment in the event of any stock dividend, stock split,

combination or other similar recapitalization with respect to the Series A-1 Preferred Stock) (the “**Series A-1 Accruing Dividends**”). From and after the date of the issuance of any shares of Series A-2 Preferred Stock, dividends at the rate per annum of eight percent (8%) of the sum of the Series A-2 Original Issue Price (as defined below), plus the amount of previously accrued dividends per share, which shall compound on an annual basis, shall accrue on each share of Series A-2 Preferred Stock (subject, in the case of the Series A-2 Original Issue Price, to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A-2 Preferred Stock) (the “**Series A-2 Accruing Dividends**”). From and after the date of the issuance of any shares of Series A-3 Preferred Stock, dividends at the rate per annum of eight percent (8%) of the sum of the Series A-3 Original Issue Price (as defined below) plus \$0.00079, plus the amount of previously accrued dividends per share, which shall compound on an annual basis, shall accrue on each share of Series A-3 Preferred Stock (subject, in the case of the Series A-3 Original Issue Price, to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A-3 Preferred Stock) (the “**Series A-3 Accruing Dividends**”). From and after the date of the issuance of any shares of Series B Preferred Stock, dividends at the rate per annum of eight percent (8%) of the sum of the Series B Original Issue Price (as defined below) plus the amount of previously accrued dividends per share, which shall compound on an annual basis, shall accrue on each share of Series B Preferred Stock (subject, in the case of the Series B Original Issue Price, to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock) (the “**Series B Accruing Dividends**”). From and after the date of the issuance of any shares of Series C Preferred Stock, dividends at the rate per annum of eight percent (8%) of the sum of the Series C Original Issue Price (as defined below) plus the amount of previously accrued dividends per share, which shall compound on an annual basis, shall accrue on each share of Series C Preferred Stock (subject, in the case of the Series C Original Issue Price, to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock) (the “**Series C Accruing Dividends**” and together with the Series A Accruing Dividends, the Series A-1 Accruing Dividends, the Series A-2 Accruing Dividends, the Series A-3 Accruing Dividends and the Series B Accruing Dividends, the “**Accruing Dividends**”). Accruing Dividends shall accrue from day to day, whether or not declared, and shall be 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 the greater of (i) the amount of the aggregate Series A Accruing Dividends, Series A-1 Accruing Dividends, Series A-2 Accruing Dividends, Series A-3 Accruing Dividends, Series B Accruing Dividends or Series C Accruing Dividends as the case may be, then accrued on the shares of the applicable series of Preferred Stock and not previously paid and (ii) (A) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of the

applicable series of Preferred Stock as would equal the product of (1) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (2) the number of shares of Common Stock issuable upon conversion of a share of the applicable series of Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend or (B) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of the applicable series of Preferred Stock determined by (1) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) and (2) multiplying such fraction by an amount equal to the Series A Original Issue Price, Series A-1 Original Issue Price, Series A-2 Original Issue Price, Series A-3 Original Issue Price, Series B Original Issue Price, or Series C Original Issue Price, as applicable; provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Preferred Stock pursuant to this Section 1 shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest Preferred Stock dividend. The “**Series A Original Issue Price**” shall mean \$0.60 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock. The “**Series A-1 Original Issue Price**” shall mean \$0.60 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A-1 Preferred Stock. The “**Series A-2 Original Issue Price**” shall mean \$1.20 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A-2 Preferred Stock. The “**Series A-3 Original Issue Price**” shall mean \$1.20 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A-3 Preferred Stock. The “**Series B Original Issue Price**” shall mean \$1.80 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock. The “**Series C Original Issue Price**” shall mean \$3.23 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock.

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

2.1 Preferential Payments to Holders of Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event (as defined below), the holders of shares of Series A Preferred Stock then outstanding, the holders of shares of Series A-1 Preferred Stock then outstanding, the holders of shares of Series A-2 Preferred Stock then outstanding, the holders of shares of Series A-3 Preferred Stock then outstanding, the holders of shares of Series B Preferred Stock then outstanding and the holders of shares of Series C Preferred Stock then outstanding shall be entitled to be paid, on a pari passu basis, out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, an amount per share equal to (i) in the case of the Series A Preferred Stock, the greater of (A) the Series A Original Issue Price, plus any Series A

Accruing Dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon, or (B) such amount per share as would have been payable had all shares of Series A Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this clause (i) is hereinafter referred to as the “**Series A Liquidation Amount**”), (ii) in the case of the Series A-1 Preferred Stock, the greater of (A) the Series A-1 Original Issue Price, plus any Series A-1 Accruing Dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon, or (B) such amount per share as would have been payable had all shares of Series A-1 Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this clause (ii) is hereinafter referred to as the “**Series A-1 Liquidation Amount**”), (iii) in the case of the Series A-2 Preferred Stock, the greater of (A) the Series A-2 Original Issue Price, plus any Series A-2 Accruing Dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon, or (B) such amount per share as would have been payable had all shares of Series A-2 Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this clause (iii) is hereinafter referred to as the “**Series A-2 Liquidation Amount**”), (iv) in the case of the Series A-3 Preferred Stock, the greater of (A) the Series A-3 Original Issue Price, plus any Series A-3 Accruing Dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon, or (B) such amount per share as would have been payable had all shares of Series A-3 Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this clause (iv) is hereinafter referred to as the “**Series A-3 Liquidation Amount**”), (v) in the case of the Series B Preferred Stock, the greater of (A) the Series B Original Issue Price, plus any Series B Accruing Dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon, or (B) such amount per share as would have been payable had all shares of Series B Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this clause (v) is hereinafter referred to as the “**Series B Liquidation Amount**”), and (vi) in the case of the Series C Preferred Stock, the greater of (A) the Series C Original Issue Price, plus any Series C Accruing Dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon, or (B) such amount per share as would have been payable had all shares of Series C Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this clause (vi) is hereinafter referred to as the “**Series C Liquidation Amount**”). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series A Preferred Stock, the holders of shares of Series A-1 Preferred Stock, the holders of shares of Series A-2 Preferred Stock, the holders of shares of Series A-3 Preferred Stock, the holders of shares of Series B Preferred Stock and the holders of shares of Series C Preferred Stock the full amount to which they shall be entitled under this Subsection 2.1, the holders of shares of Series A Preferred Stock, the holders of shares of Series A-1 Preferred Stock, the holders of shares of

Series A-2 Preferred Stock, the holders of shares of Series A-3 Preferred Stock, the holders of shares of Series B Preferred Stock and the holders of shares of Series C Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 Payments to Holders of Common Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, after the payment of all preferential amounts required to be paid to the holders of shares of Series A Preferred Stock, the holders of shares of Series A-1 Preferred Stock, the holders of shares of Series A-2 Preferred Stock, the holders of shares of Series A-3 Preferred Stock, the holders of shares of Series B Preferred Stock and the holders of shares of Series C Preferred Stock, the remaining assets of the Corporation available for distribution to its stockholders shall be distributed among the holders of shares of Common Stock, pro rata based on the number of shares held by each such holder.

2.3 Deemed Liquidation Events.

2.3.1 Definition. Each of the following events shall be considered a “**Deemed Liquidation Event**” unless the holders of a majority in voting power of the outstanding shares of Preferred Stock elect otherwise by written notice sent to the Corporation at least ten (10) days prior to the effective date of any such event:

(a) a merger or consolidation in which

(i) the Corporation is a constituent party or

(ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation,

except any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, a majority, by voting power, of the capital stock of (1) the surviving or resulting corporation or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation (provided that, for the purpose of this Subsection 2.3.1, all shares of Common Stock issuable upon exercise of Options (as defined below) outstanding immediately prior to such merger or consolidation or upon conversion of Convertible Securities (as defined below) outstanding immediately prior to such merger or consolidation shall be deemed to be outstanding immediately prior to such merger or consolidation and, if applicable, converted or exchanged in such merger or consolidation on the same terms as the actual outstanding shares of Common Stock are converted or exchanged); or

(b) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or the sale or disposition (whether by merger or otherwise) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation.

2.3.2 Effecting a Deemed Liquidation Event.

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(i) unless the agreement or plan of merger or consolidation for such transaction (the “**Merger Agreement**”) provides that the consideration payable to the stockholders of the Corporation shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2.

(b) In the event of a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(ii) or 2.3.1(b), if the Corporation does not effect a dissolution of the Corporation under the General Corporation Law within ninety (90) days after such Deemed Liquidation 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 Deemed Liquidation 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 (ii) if the holders of a majority in voting power of the then outstanding shares of Preferred Stock so request in a written instrument delivered to the Corporation not later than one hundred twenty (120) days after such Deemed Liquidation Event, the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of Directors 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 Deemed Liquidation Event (the “**Redemption Date**”), to redeem all outstanding shares of Series A Preferred Stock at a price per share equal to the Series A Liquidation Amount, all outstanding shares of Series A-1 Preferred Stock at a price per share equal to the Series A-1 Liquidation Amount, all outstanding shares of Series A-2 Preferred Stock at a price per share equal to the Series A-2 Liquidation Amount, all outstanding shares of Series A-3 Preferred Stock at a price per share equal to the Series A-3 Liquidation Amount, all outstanding shares of Series B Preferred Stock at a price per share equal to the Series B Liquidation Amount and all outstanding shares of Series C Preferred Stock at a price per share equal to the Series C Liquidation Amount. 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, the Corporation shall redeem a pro rata portion of each holder’s shares of Preferred Stock to the fullest extent of such Available Proceeds, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the Available Proceeds were sufficient to redeem all such shares, and shall redeem the remaining shares to have been redeemed as soon as practicable after the Corporation has funds legally available therefor. The Corporation shall send written notice of the mandatory redemption (the “**Redemption Notice**”) to each holder of record of Preferred Stock not less than forty (40) days prior to the Redemption Date. The Redemption Notice shall state: (i) the number of shares of

each series of Preferred Stock held by the holder that the Corporation shall redeem on the Redemption Date specified in the Redemption Notice, (ii) the Redemption Date and the Series A Liquidation Amount, the Series A-1 Liquidation Amount, the Series A-2 Liquidation Amount, the Series A-3 Liquidation Amount, the Series B Liquidation Amount and the Series C Liquidation Amount, (iii) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Subsection 4.1), and (iv) for holders of shares in certificated form, that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Preferred Stock to be redeemed. On or before the Redemption Date, each holder of shares of Preferred Stock, unless such holder has exercised his, her or its right to convert such shares as provided in Section 4, shall, if a holder of shares in certificated form, surrender the certificate or certificates representing such shares (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) to the Corporation, in the manner and at the place designated in the Redemption Notice, and thereupon the Series A Liquidation Amount, the Series A-1 Liquidation Amount, the Series A-2 Liquidation Amount, the Series A-3 Liquidation Amount, the Series B Liquidation Amount and the Series C Liquidation Amount, as the case may be, for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof. In the event less than all of the shares of Preferred Stock represented by a certificate are redeemed, a new certificate representing the unredeemed shares of Preferred Stock shall promptly be issued to such holder. If the Redemption Notice shall have been duly given, and if on the Redemption Date the Series A Liquidation Amount, the Series A-1 Liquidation Amount, the Series A-2 Liquidation Amount, the Series A-3 Liquidation Amount, the Series B Liquidation Amount and the Series C Liquidation Amount, as the case may be, payable upon redemption of the shares of Preferred Stock to be redeemed on the Redemption Date is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that any certificates evidencing any of the shares of Preferred Stock so called for redemption shall not have been surrendered, dividends with respect to such shares of Preferred Stock shall cease to accrue after the Redemption Date and all rights with respect to such shares shall forthwith after the Redemption Date terminate, except only the right of the holders to receive the Series A Liquidation Amount, the Series A-1 Liquidation Amount, the Series A-2 Liquidation Amount, the Series A-3 Liquidation Amount, the Series B Liquidation Amount and the Series C Liquidation Amount, as the case may be, without interest upon surrender of any such certificate or certificates therefor. Prior to the distribution or redemption provided for in this Subsection 2.3.2(b), the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event or in the ordinary course of business.

2.3.3 Amount Deemed Paid or Distributed. The amount deemed paid or distributed to the holders of capital stock of the Corporation upon any such merger, consolidation, sale, transfer, exclusive license, other disposition or redemption shall be the cash or the value of the property, rights or securities paid or distributed to such holders by the Corporation or the acquiring person, firm or other entity. The value of such property, rights or securities shall be determined in good faith by the Board of Directors of the Corporation, including at least one of the Preferred Stock Directors (as defined below).

2.3.4 Allocation of Escrow and Contingent Consideration. In the event of a Deemed Liquidation Event pursuant to Subsection 2.3.1(a)(i), if any portion of the consideration payable to the stockholders of the Corporation is payable only upon satisfaction of contingencies (the “**Additional Consideration**”), the Merger Agreement shall provide that (a) the portion of such consideration that is not Additional Consideration (such portion, the “**Initial Consideration**”) shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2 as if the Initial Consideration were the only consideration payable in connection with such Deemed Liquidation Event; and (b) any Additional Consideration which becomes payable to the stockholders of the Corporation upon satisfaction of such contingencies shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2 after taking into account the previous payment of the Initial Consideration as part of the same transaction. For the purposes of this Subsection 2.3.4, consideration placed into escrow or retained as holdback to be available for satisfaction of indemnification or similar obligations in connection with such Deemed Liquidation Event shall be deemed to be Additional Consideration.

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 holders of record of the shares of Preferred Stock, exclusively and as a separate class, shall be entitled to elect two (2) directors of the Corporation (the “**Preferred Stock Directors**”). Any director elected as provided in the preceding sentence may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. If the holders of shares of Preferred Stock fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, voting exclusively and as a separate class, pursuant to the first sentence of this Subsection 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Preferred Stock elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship, voting exclusively and as a separate class. The holders of record of the shares of Common Stock and of any other class or series of voting stock (including the Series A Preferred Stock, the Series A-1 Preferred Stock, the Series A-2 Preferred Stock, the Series A-3 Preferred Stock, the Series B Preferred Stock and the Series C Preferred Stock), exclusively and voting

together as a single class (on an as-converted to Common Stock basis), shall be entitled to elect the balance of the total number of directors of the Corporation. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this Subsection 3.2, a vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series or by any remaining director or directors elected by the holders of such class or series pursuant to this Subsection 3.2.

3.3 Preferred Stock Protective Provisions. At any time when 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 to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of the holders of a majority in voting power of the then outstanding shares of Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.3.1 liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any merger or consolidation or any other Deemed Liquidation Event, or consent to any of the foregoing;

3.3.2 amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation;

3.3.3 create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock unless the same ranks junior to the Series A Preferred Stock, Series A-1 Preferred Stock, Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series B Preferred Stock and Series C Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption, or increase or decrease the authorized number of shares of Series A Preferred Stock, Series A-1 Preferred Stock, Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Preferred Stock or increase the authorized number of shares of any additional class or series of capital stock unless the same ranks junior to the Series A Preferred Stock, Series A-1 Preferred Stock, Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series B Preferred Stock and Series C Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption;

3.3.4 (i) reclassify, alter or amend any existing security of the Corporation that is *pari passu* with the Series A Preferred Stock, Series A-1 Preferred Stock, Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series B Preferred Stock or Series C Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to the Series A Preferred Stock, Series A-1 Preferred Stock, Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series B

Preferred Stock, or Series C Preferred Stock, respectively, in respect of any such right, preference or privilege, or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to the Series A Preferred Stock, Series A-1 Preferred Stock, Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series B Preferred Stock or Series C Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or pari passu with the Series A Preferred Stock, Series A-1 Preferred Stock, Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series B Preferred Stock or Series C Preferred Stock, respectively, in respect of any such right, preference or privilege;

3.3.5 purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Preferred Stock as expressly authorized herein, (ii) dividends or other distributions payable on the Common Stock solely in the form of additional shares of Common Stock and (iii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then-current fair market value thereof;

3.3.6 create, or authorize the creation of, or issue, or authorize the issuance of any debt security or permit any subsidiary to take any such action with respect to any debt security unless such debt security has received the prior approval of the Board of Directors, including the approval of at least one of the Preferred Stock Directors;

3.3.7 create, or hold capital stock in, any subsidiary that is not wholly owned (either directly or through one or more other subsidiaries) by the Corporation, or sell, transfer or otherwise dispose of any capital stock of any direct or indirect subsidiary of the Corporation, or permit any direct or indirect subsidiary to sell, lease, transfer, exclusively license or otherwise dispose (in a single transaction or series of related transactions) of all or substantially all of the assets of such subsidiary; or

3.3.8 increase or decrease the authorized number of directors constituting the Board of Directors.

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 Ratios.

(a) Each share of Series A 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

nonassessable shares of Common Stock as is determined by dividing the Series A Original Issue Price by the Series A Conversion Price (as defined below) in effect at the time of conversion. The “**Series A Conversion Price**” shall initially be equal to \$0.60. Such initial Series A Conversion Price, and the rate at which shares of Series A Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

(b) Each share of Series A-1 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 nonassessable shares of Common Stock as is determined by dividing the Series A-1 Original Issue Price by the Series A-1 Conversion Price (as defined below) in effect at the time of conversion. The “**Series A-1 Conversion Price**” shall initially be equal to \$0.60. Such initial Series A-1 Conversion Price, and the rate at which shares of Series A-1 Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

(c) Each share of Series A-2 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 nonassessable shares of Common Stock as is determined by dividing the Series A-2 Original Issue Price by the Series A-2 Conversion Price (as defined below) in effect at the time of conversion. The “**Series A-2 Conversion Price**” shall initially be equal to \$1.20. Such initial Series A-2 Conversion Price, and the rate at which shares of Series A-2 Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

(d) Each share of Series A-3 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 nonassessable shares of Common Stock as is determined by dividing the Series A-3 Original Issue Price by the Series A-3 Conversion Price (as defined below) in effect at the time of conversion. The “**Series A-3 Conversion Price**” shall initially be equal to \$1.20. Such initial Series A-3 Conversion Price, and the rate at which shares of Series A-3 Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

(e) Each share of Series B 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 nonassessable shares of Common Stock as is determined by dividing the Series B Original Issue Price by the Series B Conversion Price (as defined below) in effect at the time of conversion. The “**Series B Conversion Price**” shall initially be equal to \$1.80. Such initial Series B Conversion Price, and the rate at which shares of Series B Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

(f) Each share of Series C 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 nonassessable shares of Common Stock as is determined by dividing the Series C Original Issue Price by the Series C Conversion Price (as defined below) in effect at the time of conversion. The “**Series C Conversion Price**” shall initially be equal to \$3.23. Such initial Series C Conversion Price, and the rate at which shares of Series C 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 as determined in good faith by the Board of Directors of the Corporation, including at least one of the Preferred Stock Directors. 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 and the aggregate number of shares of Common 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, 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 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, (x) in the event such shares are certificated, a certificate or certificates for the number of full shares of Common 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, and (y) in the event such shares are uncertificated, a notice of issuance of uncertificated shares and may, upon written request, issue and deliver a certificate for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and may, if applicable and upon written request, issue and deliver a certificate for the number (if any) of shares of Preferred Stock represented by any 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 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 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 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 shall not be sufficient to effect the conversion of all then outstanding shares of Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common 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 Series A Conversion Price, Series A-1 Conversion Price, Series A-2 Conversion Price, Series A-3 Conversion Price, Series B Conversion Price or Series C Conversion Price below the then par value of the shares of Common Stock issuable upon conversion of the Series A Preferred Stock, the Series A-1 Preferred Stock, the Series A-2 Preferred Stock, the Series A-3 Preferred Stock, the Series B Preferred Stock or the Series C Preferred Stock, as the case may be, 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 nonassessable shares of Common Stock at such adjusted Series A Conversion Price, Series A-1 Conversion Price, Series A-2 Conversion Price, Series A-3 Conversion Price Series B Conversion Price or Series C 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 such series of Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price or the Series C Conversion Price shall be made for any declared but unpaid dividends on the Series A Preferred Stock, the Series A-1 Preferred Stock, the Series A-2 Preferred Stock, the Series A-3 Preferred Stock, the Series B Preferred Stock or the Series C Preferred Stock, as the case may be, surrendered for conversion or on the Common 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 C Original Issue Date”** shall mean the date on which the first share of Series C 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 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 C 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 issued in any public offering of Common Stock under the Securities Act of 1933, as amended (the “**Securities Act**”);
- (iv) 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 at least one of the Preferred Stock Directors; or
- (v) 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.

4.4.2 No Adjustment of Conversion Price. No adjustment in the Series A 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 a majority of the then outstanding shares of Series A Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment in the Series A-1 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 a majority of the then outstanding shares of Series A-1 Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment in the Series A-2 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 a majority of the then outstanding shares of Series A-2 Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment in the Series A-3 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 a majority of the then outstanding shares of Series A-3 Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment in the Series B 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 a majority of the then outstanding shares of Series B Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment in the Series C 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 a majority of the then outstanding shares of Series C Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common 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 C 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 Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price or the Series C 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 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 Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price or the Series C Conversion Price, as the case may be, 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 Series A Conversion Price, Series A-1 Conversion Price, Series A-2 Conversion Price, Series A-3 Conversion Price, the Series B Conversion Price or the Series C Conversion Price, as the case may be, as would have been 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 Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price or the Series C Conversion Price to an amount which exceeds the lower of (i) the Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price or the Series C Conversion Price, as the case may be, in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price or

the Series C Conversion Price, as the case may be, 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 Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price or the Series C 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 Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price or the Series C Conversion Price, as the case may be, then in effect, or because such Option or Convertible Security was issued before the Series C Original Issue Date), are revised after the Series C 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 Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price or the Series C Conversion Price pursuant to the terms of Subsection 4.4.4, the Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price and the Series C Conversion Price, as the case may be, shall be readjusted to such Series A Conversion Price, Series A-1 Conversion Price, Series A-2 Conversion Price, Series A-3 Conversion Price, the Series B Conversion Price or the Series C Conversion Price, as the case may be, as would have been 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 Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price or the Series C 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 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 Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price or the Series C 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 Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price or the Series C 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 C 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 Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price and/or the Series C Conversion Price, each as in effect immediately prior to such issue, then the Series A Conversion Price, Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price and/or the Series C Conversion Price, as the case may be, 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:

$$CP2 = CP1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) “CP₂” shall mean (1) in the case of an adjustment to the Series A Conversion Price, the Series A Conversion Price in effect immediately after such issue of Additional Shares of Common Stock, (2) in the case of an adjustment to the Series A-1 Conversion Price, the Series A-1 Conversion Price in effect immediately after such issue of Additional Shares of Common Stock, (3) in the case of an adjustment to the Series A-2 Conversion Price, the Series A-2 Conversion Price in effect immediately after such issue of Additional Shares of Common Stock, (4) in the case of an adjustment to the Series A-3 Conversion Price, the Series A-3 Conversion Price in effect immediately after such issue of Additional Shares of Common Stock, (5) in the case of an adjustment to the Series B Conversion Price, the Series B Conversion Price in effect immediately after such issue of Additional Shares of Common Stock, and (6) in the case of an adjustment to the Series C Conversion Price, the Series C Conversion Price in effect immediately after such issue of Additional Shares of Common Stock;

(b) “CP₁” shall mean (1) in the case of an adjustment to the Series A Conversion Price, the Series A Conversion Price in effect immediately prior to such issue of Additional Shares of Common Stock, (2) in the case of an adjustment to the Series A-1 Conversion Price, the Series A-1 Conversion Price in effect immediately prior to such issue of Additional Shares of Common Stock, (3) in the case of an adjustment to the Series A-2 Conversion Price, the Series A-2 Conversion Price in effect immediately prior to such issue of Additional Shares of Common Stock, (4) in the case of an adjustment to the Series A-3 Conversion Price, the Series A-3 Conversion Price in effect immediately prior to such issue of Additional Shares of Common Stock, (5) in the case of an adjustment to the Series B Conversion Price, the Series B Conversion Price in effect immediately prior to such issue of Additional Shares of Common Stock, and (6) in the case of an adjustment to the Series C Conversion Price, the Series C 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 CP₁ (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP₁); 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, including at least one of the Preferred Stock Directors; 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, including at least one of the Preferred Stock Directors.

(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 Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price and/or the Series C Conversion Price pursuant to the terms of Subsection 4.4.4, and such issuance dates occur within a period of no more than ninety (90) days from the first such issuance to the final such issuance, then, upon the final such issuance, the Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price and/or the Series C Conversion Price, as the case may be, 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 C Original Issue Date effect a subdivision of the outstanding Common Stock, the Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price and the Series C Conversion Price, each as in effect immediately before such 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 C Original Issue Date combine the outstanding shares of Common Stock, the Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price and the Series C Conversion Price, each as in effect immediately before such 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 C 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 Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price and the Series C Conversion Price, each as 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 Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price and the Series C Conversion Price, as the case may be, then in effect by a fraction:

(1) 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

(2) 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 Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price and the Series C Conversion Price, as the case may be, shall be recomputed accordingly as of the close of business on such record date and thereafter the Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price and the Series C Conversion Price, as the case may be, shall be adjusted pursuant to this subsection as of the time of actual payment of such dividends or distributions; and (b) no such adjustment shall be made with respect to the Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price or the Series C Conversion Price if the holders of the applicable series 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 the applicable series of Preferred Stock had been converted into Common 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 C 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 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 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 4.5, 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 the applicable series 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, including at least one of the Preferred Stock

Directors) 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 applicable series of 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 Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price or the Series C Conversion Price, as the case may be) 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 applicable series of Preferred Stock. For the avoidance of doubt, nothing in this Subsection 4.8 shall be construed as preventing the holders of Preferred Stock from seeking any appraisal rights to which they are otherwise entitled under the General Corporation Law in connection with a merger triggering an adjustment hereunder, nor shall this Subsection 4.8 be deemed conclusive evidence of the fair value of the shares of Preferred Stock in any such appraisal proceeding.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price and/or the Series C 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 the applicable series 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 applicable series of 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, furnish or cause to be furnished to such holder a certificate setting forth (i) the Series A Conversion Price, the Series A-1 Conversion Price, the Series A-2 Conversion Price, the Series A-3 Conversion Price, the Series B Conversion Price and/or the Series C Conversion Price, as the case may be, 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 the applicable series 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 Deemed Liquidation Event; or

(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, in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act resulting in at least \$35,000,000 of gross proceeds to the Corporation or (b) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of a majority in voting power of the then outstanding shares of Preferred Stock, voting together as a single class (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.

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 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 the surrender of any certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock, the Corporation shall (a) (x) in the event that such shares are certificated, 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, or (y) in the event that such shares are uncertificated, issue and deliver to such holder, or to his, her or its nominee, a notice of issuance of uncertificated shares and may, upon written request, issue and deliver a certificate for the number of full shares of Common Stock issuable upon 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 each applicable series of Preferred Stock accordingly.

6. Redeemed or Otherwise Acquired Shares. Any shares of Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Preferred Stock following redemption.

7. Waiver. Any of the rights, powers, preferences and other terms of the Series A Preferred Stock set forth herein may be waived, either prospectively or retrospectively, on behalf of all holders of Series A Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series A Preferred Stock then outstanding. Any of the rights, powers, preferences and other terms of the Series A-1 Preferred Stock set forth herein may be waived, either prospectively or retrospectively, on behalf of all holders of Series A-1 Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series A-1 Preferred Stock then outstanding. Any of the rights, powers, preferences and other terms of the Series A-2 Preferred Stock set forth herein may be waived, either prospectively or retrospectively, on behalf of all holders of Series A-2 Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series A-2 Preferred Stock then outstanding. Any of the rights, powers, preferences and other terms of the Series A-3 Preferred Stock set forth herein may be waived, either prospectively or retrospectively, on behalf of all holders of Series A-3 Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series A-3 Preferred Stock then outstanding. Any of the rights, powers, preferences and other terms of the Series B Preferred Stock set forth herein may be waived, either prospectively or retrospectively, on behalf of all holders of Series B Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series B Preferred Stock then outstanding. Any of the rights, powers, preferences and other terms of the Series C Preferred Stock set forth herein may be waived, either prospectively or retrospectively, on behalf of all holders of Series C Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series C Preferred Stock then outstanding. Any of the rights, powers, preferences and other terms of the Preferred Stock set forth herein, except as otherwise provided in this Section 7, may be waived, either prospectively or retrospectively, on behalf of all holders of Preferred Stock by the affirmative written consent or vote of the holders of a majority in voting power of the shares of 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.

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 expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

SIXTH: Subject to any additional vote required by the Certificate of Incorporation, the number of directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation.

SEVENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

EIGHTH: 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.

NINTH: 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 Ninth 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 Ninth 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.

TENTH: The Corporation renounces, to the fullest extent permitted by any 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.

ELEVENTH: Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim for breach of a fiduciary duty owed by any director, officer, employee or agent of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, the certificate of incorporation or the by-laws of the Corporation or (iv) any action asserting a claim governed by the internal affairs doctrine, in each case subject to said Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein.

TWELFTH: The following indemnification provisions shall apply to the persons enumerated below.

1. Right to Indemnification of Directors and Officers. The Corporation shall indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any person (an "**Indemnified Person**") who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "**Proceeding**"), by reason of the fact that such person, or a person for whom such person is the legal representative, is or was a director or officer of the Corporation or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such Indemnified Person in such Proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section 3 of this Article Twelfth, the Corporation shall be required to indemnify an Indemnified Person in connection with a Proceeding (or part thereof) commenced by such Indemnified Person only if the commencement of such Proceeding (or part thereof) by the Indemnified Person was authorized in advance by the Board of Directors.

2. Prepayment of Expenses of Directors and Officers. The Corporation shall pay the expenses (including attorneys' fees) incurred by an Indemnified Person in defending any Proceeding in advance of its final disposition, provided, however, that, to the extent required by law, such payment of expenses in advance of the final disposition of the Proceeding shall be made only upon receipt of an undertaking by the Indemnified Person to repay all amounts advanced if it should be ultimately determined that the Indemnified Person is not entitled to be indemnified under this Article Twelfth or otherwise.

3. Claims by Directors and Officers. If a claim for indemnification or advancement of expenses under this Article Twelfth is not paid in full within thirty (30) days after a written claim therefor by the Indemnified Person has been received by the Corporation, the Indemnified Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim. In any such action the Corporation shall have the burden of proving that the Indemnified Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

4. Indemnification of Employees and Agents. The Corporation may indemnify and advance expenses to any person who was or is made or is threatened to be made or is otherwise involved in any Proceeding by reason of the fact that such person, or a person for whom such person is the legal representative, is or was an employee or agent of the Corporation or, while an employee or agent of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such person in connection with such Proceeding. The ultimate determination of entitlement to indemnification of persons who are non-director or officer employees or agents shall be made in such manner as is determined by the Board of Directors in its sole discretion. Notwithstanding the foregoing sentence, the Corporation shall not be required to indemnify a person in connection with a Proceeding initiated by such person if the Proceeding was not authorized in advance by the Board of Directors.

5. Advancement of Expenses of Employees and Agents. The Corporation may pay the expenses (including attorneys' fees) incurred by an employee or agent in defending any Proceeding in advance of its final disposition on such terms and conditions as may be determined by the Board of Directors.

6. Non-Exclusivity of Rights. The rights conferred on any person by this Article Twelfth shall not be exclusive of any other rights which such person may have or hereafter acquire under any statute, provision of the certificate of incorporation, bylaw, agreement, vote of stockholders or disinterested directors or otherwise.

7. Other Indemnification. The Corporation's obligation, if any, to indemnify any person who was or is serving at its request as a director, officer or employee of another Corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise shall be reduced by any amount such person may collect as indemnification from such other Corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise.

8. Insurance. The Board of Directors may, to the full extent permitted by applicable law as it presently exists, or may hereafter be amended from time to time, authorize an appropriate officer or officers to purchase and maintain at the Corporation's expense insurance: (a) to indemnify the Corporation for any obligation which it incurs as a result of the indemnification of directors, officers and employees under the provisions of this Article Twelfth; and (b) to indemnify or insure directors, officers and employees against liability in instances in which they may not otherwise be indemnified by the Corporation under the provisions of this Article Twelfth.

9. Amendment or Repeal. Any repeal or modification of the foregoing provisions of this Article Twelfth shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification. The rights provided hereunder shall inure to the benefit of any Indemnified Person and such person's heirs, executors and administrators.

* * *

3. 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.

4. That this Amended and Restated Certificate of Incorporation, which restates and integrates and further amends the provisions of this corporation's Amended and Restated Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on February 8, 2018.

By: /s/ Balkrishan (Simba) Gill, Ph.D.

Name: Balkrishan (Simba) Gill, Ph.D.

Title: President and Chief Executive Officer

BY-LAWS
OF
EVELO BIOSCIENCES, INC.

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ARTICLE I

STOCKHOLDERS

1.1 Place of Meetings. All meetings of stockholders shall be held at such place as may be designated from time to time by the Board of Directors, the Chairman of the Board, the Chief Executive Officer or the President or, if not so designated, at the principal office of the corporation. The Board of Directors may, in its sole discretion, determine that a meeting shall not be held at any place, but may instead be held solely by means of remote communication in a manner consistent with the General Corporation Law of the State of Delaware.

1.2 Annual Meeting. The annual meeting of stockholders for the election of directors and for the transaction of such other business as may properly be brought before the meeting shall be held on a date and at a time designated by the Board of Directors, the Chairman of the Board, the Chief Executive Officer or the President (which date shall not be a legal holiday in the place where the meeting is to be held).

1.3 Special Meetings. Special meetings of stockholders for any purpose or purposes may be called at any time by only the Board of Directors, the Chairman of the Board, the Chief Executive Officer or the President, and may not be called by any other person or persons. The Board of Directors may postpone or reschedule any previously scheduled special meeting of stockholders. 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.

1.4 Notice of Meetings. Except as otherwise provided by law, notice of each meeting of stockholders, whether annual or special, shall be given not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting. Without limiting the manner by which notice otherwise may be given to stockholders, any notice shall be effective if given by a form of electronic transmission consented to (in a manner consistent with the General Corporation Law of the State of Delaware) by the stockholder to whom the notice is given. The notices of all meetings shall state the place, if any, date and time of the meeting and the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such meeting. The notice of a special meeting shall state, in addition, the purpose or purposes for which the meeting is called. If notice is given by mail, such notice shall be deemed given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the corporation. If notice is given by electronic transmission, such notice shall be deemed given at the time specified in Section 232 of the General Corporation Law of the State of Delaware.

1.5 Voting List. The Secretary shall prepare, at least 10 days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, for a period of at least 10 days prior to the meeting: (a) 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 (b) during

ordinary business hours, at the principal place of business of the corporation. If the meeting is to be held at a physical location (and not solely by means of remote communication), then the list shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting. The list shall presumptively determine the identity of the stockholders entitled to vote at the meeting and the number of shares held by each of them.

1.6 Quorum. Except as otherwise provided by law, the Certificate of Incorporation or these By-laws, the holders of a majority in voting power of the shares of the capital stock of the corporation issued and outstanding and entitled to vote at the meeting, present in person, present by means of remote communication in a manner, if any, authorized by the Board of Directors in its sole discretion, or represented by proxy, shall constitute a quorum for the transaction of business; provided, however, that where a separate vote by a class or classes or series of capital stock is required by law or the Certificate of Incorporation, the holders of a majority in voting power of the shares of such class or classes or series of the capital stock of the corporation issued and outstanding and entitled to vote on such matter, present in person, present by means of remote communication in a manner, if any, authorized by the Board of Directors in its sole discretion, or represented by proxy, shall constitute a quorum entitled to take action with respect to the vote on such matter. A quorum, once established at a meeting, shall not be broken by the withdrawal of enough votes to leave less than a quorum.

1.7 Adjournments. Any meeting of stockholders may be adjourned from time to time to any other time and to any other place at which a meeting of stockholders may be held under these By-laws by the chairman of the meeting or by the stockholders present or represented at the meeting and entitled to vote, although less than a quorum. It shall not be necessary to notify any stockholder of any adjournment of less than 30 days if the time and place, if any, of the adjourned meeting, and the means of remote communication, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such adjourned meeting, are announced at the meeting at which adjournment is taken, unless after the adjournment a new record date is fixed for the adjourned meeting. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting.

1.8 Voting and Proxies. Each stockholder shall have one vote for each share of stock entitled to vote held of record by such stockholder and a proportionate vote for each fractional share so held, unless otherwise provided by law or the Certificate of Incorporation. Each stockholder of record entitled to vote at a meeting of stockholders, or to express consent or dissent to corporate action without a meeting, may vote or express such consent or dissent in person (including by means of remote communications, if any, by which stockholders may be deemed to be present in person and vote at such meeting) or may authorize another person or persons to vote or act for such stockholder by a proxy executed or transmitted in a manner permitted by the General Corporation Law of the State of Delaware by the stockholder or such stockholder's authorized agent and delivered (including by electronic transmission) to the Secretary of the corporation. No such proxy shall be voted or acted upon after three years from the date of its execution, unless the proxy expressly provides for a longer period.

1.9 Action at Meeting. When a quorum is present at any meeting, any matter other than the election of directors to be voted upon by the stockholders at such meeting shall be decided by the vote of the holders of shares of stock having a majority in voting power of the votes cast by the holders of all of the shares of stock present or represented at the meeting and voting affirmatively or negatively on such matter (or if there are two or more classes or series of stock entitled to vote as separate classes, then in the case of each such class or series, the holders of a majority in voting power of the shares of stock of that class or series present or represented at the meeting and voting affirmatively or negatively on such matter), except when a different vote is required by law, the Certificate of Incorporation or these By-laws. When a quorum is present at any meeting, any election by stockholders of directors shall be determined by a plurality of the votes cast by the stockholders entitled to vote on the election.

1.10 Conduct of Meetings.

(a) Chairman of Meeting. Meetings of stockholders shall be presided over by the Chairman of the Board, if any, or in the Chairman's absence by the Vice Chairman of the Board, if any, or in the Vice Chairman's absence by the Chief Executive Officer, or in the Chief Executive Officer's absence, by the President, or in the President's absence by a Vice President, or in the absence of all of the foregoing persons by a chairman designated by the Board of Directors, or in the absence of such designation by a chairman chosen by vote of the stockholders at the meeting. The Secretary shall act as secretary of the meeting, but in the Secretary's absence the chairman of the meeting may appoint any person to act as secretary of the meeting.

(b) Rules, Regulations and Procedures. The Board of Directors may adopt by resolution such rules, regulations and procedures for the conduct of any meeting of stockholders of the corporation as it shall deem appropriate including, without limitation, such guidelines and procedures as it may deem appropriate regarding the participation by means of remote communication of stockholders and proxyholders not physically present at a meeting. Except to the extent inconsistent with such rules, regulations and procedures as adopted by the Board of Directors, the chairman of any meeting of stockholders shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the chairman of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (i i) rules and procedures for maintaining order at the meeting and the safety of those present; (iii) limitations on attendance at or participation in the meeting to stockholders of record of the corporation, their duly authorized and constituted proxies or such other persons as shall be determined; (iv) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (v) limitations on the time allotted to questions or comments by participants. Unless and to the extent determined by the Board of Directors or the chairman of the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

1.11 Action without Meeting.

(a) Taking of Action by Consent. Any action required or permitted to be taken at any annual or special meeting of stockholders of the corporation may be taken without a meeting, without prior notice and without a vote, if a consent 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 entitled to vote on such action were present and voted. Except as otherwise provided by the Certificate of Incorporation, stockholders may act by written consent to elect directors; provided, however, that, if such consent is less than unanimous, such action by written consent may be in lieu of holding an annual meeting only if all of the directorships to which directors could be elected at an annual meeting held at the effective time of such action are vacant and are filled by such action.

(b) Electronic Transmission of Consents. A telegram, cablegram or other electronic transmission consenting to an action to be taken and transmitted by a stockholder or proxyholder, or by a person or persons authorized to act for a stockholder or proxyholder, shall be deemed to be written, signed and dated for the purposes of this section, provided that any such telegram, cablegram or other electronic transmission sets forth or is delivered with information from which the corporation can determine (i) that the telegram, cablegram or other electronic transmission was transmitted by the stockholder or proxyholder or by a person or persons authorized to act for the stockholder or proxyholder and (ii) the date on which such stockholder or proxyholder or authorized person or persons transmitted such telegram, cablegram or electronic transmission. The date on which such telegram, cablegram or electronic transmission is transmitted shall be deemed to be the date on which such consent was signed. No consent given by telegram, cablegram or other electronic transmission shall be deemed to have been delivered until such consent is reproduced in paper form and until such paper form shall be delivered to the corporation by delivery to its registered office in the State of Delaware, its principal place of business or an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to a corporation's registered office shall be made by hand or by certified or registered mail, return receipt requested. Notwithstanding the foregoing limitations on delivery, consents given by telegram, cablegram or other electronic transmission may be otherwise delivered to the principal place of business of the corporation or to an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded if, to the extent and in the manner provided by resolution of the Board of Directors. Any copy, facsimile or other reliable reproduction of a consent in writing may be substituted or used in lieu of the original writing for any and all purposes for which the original writing could be used, provided that such copy, facsimile or other reproduction shall be a complete reproduction of the entire original writing.

(c) Notice of Taking of Corporate Action. Prompt notice of the taking of corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for such meeting had been the date that written consents signed by a sufficient number of holders to take the action were delivered to the corporation.

ARTICLE II

DIRECTORS

2.1 General Powers. The business and affairs of the corporation shall be managed by or under the direction of a Board of Directors, who may exercise all of the powers of the corporation except as otherwise provided by law or the Certificate of Incorporation.

2.2 Number, Election and Qualification. Subject to the rights of holders of any series of Preferred Stock to elect directors, the number of directors of the corporation shall be established from time to time by the stockholders or the Board of Directors. The directors shall be elected at the annual meeting of stockholders by such stockholders as have the right to vote on such election. Election of directors need not be by written ballot. Directors need not be stockholders of the corporation.

2.3 Chairman of the Board; Vice Chairman of the Board. The Board of Directors may appoint from its members a Chairman of the Board and a Vice Chairman of the Board, neither of whom need be an employee or officer of the corporation. If the Board of Directors appoints a Chairman of the Board, such Chairman shall perform such duties and possess such powers as are assigned by the Board of Directors and, if the Chairman of the Board is also designated as the corporation's Chief Executive Officer, shall have the powers and duties of the Chief Executive Officer prescribed in Section 3.7 of these By-laws. If the Board of Directors appoints a Vice Chairman of the Board, such Vice Chairman shall perform such duties and possess such powers as are assigned by the Board of Directors. Unless otherwise provided by the Board of Directors, the Chairman of the Board or, in the Chairman's absence, the Vice Chairman of the Board, if any, shall preside at all meetings of the Board of Directors.

2.4 Tenure. Each director shall hold office until the next annual meeting of stockholders and until a successor is elected and qualified, or until such director's earlier death, resignation or removal.

2.5 Quorum. The greater of (a) a majority of the directors at any time in office and (b) one-third of the number of directors fixed pursuant to Section 2.2 of these By-laws shall constitute a quorum of the Board of Directors. If at any meeting of the Board of Directors there shall be less than such a quorum, a majority of the directors present may adjourn the meeting from time to time without further notice other than announcement at the meeting, until a quorum shall be present.

2.6 Action at Meeting. Every act or decision done or made by a majority of the directors present at a meeting of the Board of Directors duly held at which a quorum is present shall be regarded as the act of the Board of Directors, unless a greater number is required by law or by the Certificate of Incorporation.

2.7 Removal. Except as otherwise provided by the General Corporation Law of the State of Delaware, any one or more or all of the directors of the corporation may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors, except that the directors elected by the holders of a particular class or series of stock may be removed without cause only by vote of the holders of a majority of the outstanding shares of such class or series.

2.8 Vacancies. Subject to the rights of holders of any series of Preferred Stock to elect directors, unless and until filled by the stockholders, any vacancy or newly-created directorship on the Board of Directors, however occurring, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director. A director elected to fill a vacancy shall be elected for the unexpired term of such director's predecessor in office, and a director chosen to fill a position resulting from a newly-created directorship shall hold office until the next annual meeting of stockholders and until a successor is elected and qualified, or until such director's earlier death, resignation or removal.

2.9 Resignation. Any director may resign by delivering a resignation in writing or by electronic transmission to the corporation at its principal office or to the Chairman of the Board, the Chief Executive Officer, the President or the Secretary. Such resignation shall be effective upon delivery unless it is specified to be effective at some later time or upon the happening of some later event.

2.10 Regular Meetings. Regular meetings of the Board of Directors may be held without notice at such time and place as shall be determined from time to time by the Board of Directors; provided that any director who is absent when such a determination is made shall be given notice of the determination. A regular meeting of the Board of Directors may be held without notice immediately after and at the same place as the annual meeting of stockholders.

2.11 Special Meetings. Special meetings of the Board of Directors may be held at any time and place designated in a call by the Chairman of the Board, the Chief Executive Officer, the President, two or more directors, or by one director in the event that there is only a single director in office.

2.12 Notice of Special Meetings. Notice of the date, place, if any, and time of any special meeting of directors shall be given to each director by the Secretary or by the officer or one of the directors calling the meeting. Notice shall be duly given to each director (a) in person or by telephone at least 24 hours in advance of the meeting, (b) by sending written notice by reputable overnight courier, telecopy, facsimile or electronic transmission, or delivering written notice by hand, to such director's last known business, home or electronic transmission address at least 48 hours in advance of the meeting, or (c) by sending written notice by first-class mail to such director's last known business or home address at least 72 hours in advance of the meeting. A notice or waiver of notice of a meeting of the Board of Directors need not specify the purposes of the meeting.

2.13 Meetings by Conference Communications Equipment. Directors may participate in meetings of the Board of Directors or any committee thereof by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation by such means shall constitute presence in person at such meeting.

2.14 Action by Consent. 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 all members of the Board of Directors or committee, as the case may be, consent to the action in writing or by electronic transmission, and the written consents or electronic transmissions are filed with the minutes of proceedings of the Board of Directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

2.15 Committees. The Board of Directors may designate one or more committees, each committee to consist of one or more of the directors of the corporation with such lawfully delegable powers and duties as the Board of Directors thereby confers, to serve at the pleasure of the Board of Directors. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members of the committee present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board of Directors and subject to the provisions of law, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation and may authorize the seal of the corporation to be affixed to all papers which may require it. Each such committee shall keep minutes and make such reports as the Board of Directors may from time to time request. Except as the Board of Directors may otherwise determine, any committee may make rules for the conduct of its business, but unless otherwise provided by the directors or in such rules, its business shall be conducted as nearly as possible in the same manner as is provided in these By-laws for the Board of Directors. Except as otherwise provided in the Certificate of Incorporation, these By-laws, or the resolution of the Board of Directors designating the committee, a committee may create one or more subcommittees, each subcommittee to consist of one or more members of the committee, and delegate to a subcommittee any or all of the powers and authority of the committee.

2.16 Compensation of Directors. Directors may be paid such compensation for their services and such reimbursement for expenses of attendance at meetings as the Board of Directors may from time to time determine. No such payment shall preclude any director from serving the corporation or any of its parent or subsidiary entities in any other capacity and receiving compensation for such service.

ARTICLE III

OFFICERS

3.1 Titles. The officers of the corporation shall consist of a Chief Executive Officer, a President, a Secretary, a Treasurer and such other officers with such other titles as the Board of Directors shall determine, including one or more Vice Presidents, Assistant Treasurers and Assistant Secretaries. The Board of Directors may appoint such other officers as it may deem appropriate.

3.2 Election. The Chief Executive Officer, President, Treasurer and Secretary shall be elected annually by the Board of Directors at its first meeting following the annual meeting of stockholders. Other officers may be appointed by the Board of Directors at such meeting or at any other meeting.

3.3 Qualification. No officer need be a stockholder. Any two or more offices may be held by the same person.

3.4 Tenure. Except as otherwise provided by law, by the Certificate of Incorporation or by these By-laws, each officer shall hold office until such officer's successor is elected and qualified, unless a different term is specified in the resolution electing or appointing such officer, or until such officer's earlier death, resignation or removal.

3.5 Resignation and Removal. Any officer may resign by delivering a written resignation to the corporation at its principal office or to the Chief Executive Officer, the President or the Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some later time or upon the happening of some later event. Any officer may be removed at any time, with or without cause, by vote of a majority of the directors then in office. Except as the Board of Directors may otherwise determine, no officer who resigns or is removed shall have any right to any compensation as an officer for any period following such officer's resignation or removal, or any right to damages on account of such removal, whether such officer's compensation be by the month or by the year or otherwise, unless such compensation is expressly provided for in a duly authorized written agreement with the corporation.

3.6 Vacancies. The Board of Directors may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of Chief Executive Officer, President, Treasurer and Secretary. Each such successor shall hold office for the unexpired term of such officer's predecessor and until a successor is elected and qualified, or until such officer's earlier death, resignation or removal.

3.7 President; Chief Executive Officer. Unless the Board of Directors has designated another person as the corporation's Chief Executive Officer, the President shall be the Chief Executive Officer of the corporation. The Chief Executive Officer shall have general charge and supervision of the business of the corporation subject to the direction of the Board of Directors, and shall perform all duties and have all powers that are commonly incident to the office of chief executive or that are delegated to such officer by the Board of Directors. The President shall perform such other duties and shall have such other powers as the Board of Directors or the Chief Executive Officer (if the President is not the Chief Executive Officer) may from time to time prescribe. In the event of the absence, inability or refusal to act of the Chief Executive Officer or the President (if the President is not the Chief Executive Officer), the Vice President (or if there shall be more than one, the Vice Presidents in the order determined by the Board of Directors) shall perform the duties of the Chief Executive Officer and when so performing such duties shall have all the powers of and be subject to all the restrictions upon the Chief Executive Officer.

3.8 Vice Presidents. Each Vice President shall perform such duties and possess such powers as the Board of Directors or the Chief Executive Officer may from time to time prescribe. The Board of Directors may assign to any Vice President the title of Executive Vice President, Senior Vice President or any other title selected by the Board of Directors.

3.9 Secretary and Assistant Secretaries. The Secretary shall perform such duties and shall have such powers as the Board of Directors or the Chief Executive Officer may from time to time prescribe. In addition, the Secretary shall perform such duties and have such powers as are incident to the office of the secretary, including without limitation the duty and power to give notices of all meetings of stockholders and special meetings of the Board of Directors, to attend all meetings of stockholders and the Board of Directors and keep a record of the proceedings, to maintain a stock ledger and prepare lists of stockholders and their addresses as required, to be custodian of corporate records and the corporate seal and to affix and attest to the same on documents.

Any Assistant Secretary shall perform such duties and possess such powers as the Board of Directors, the Chief Executive Officer or the Secretary may from time to time prescribe. In the event of the absence, inability or refusal to act of the Secretary, the Assistant Secretary (or if there shall be more than one, the Assistant Secretaries in the order determined by the Board of Directors) shall perform the duties and exercise the powers of the Secretary.

In the absence of the Secretary or any Assistant Secretary at any meeting of stockholders or directors, the chairman of the meeting shall designate a temporary secretary to keep a record of the meeting.

3.10 Treasurer and Assistant Treasurers. The Treasurer shall perform such duties and shall have such powers as may from time to time be assigned by the Board of Directors or the Chief Executive Officer. In addition, the Treasurer shall perform such duties and have such powers as are incident to the office of treasurer, including without limitation the duty and power to keep and be responsible for all funds and securities of the corporation, to deposit funds of the corporation in depositories selected in accordance with these By-laws, to disburse such funds as ordered by the Board of Directors, to make proper accounts of such funds, and to render as required by the Board of Directors statements of all such transactions and of the financial condition of the corporation.

The Assistant Treasurers shall perform such duties and possess such powers as the Board of Directors, the Chief Executive Officer or the Treasurer may from time to time prescribe. In the event of the absence, inability or refusal to act of the Treasurer, the Assistant Treasurer (or if there shall be more than one, the Assistant Treasurers in the order determined by the Board of Directors) shall perform the duties and exercise the powers of the Treasurer.

3.11 Salaries. Officers of the corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board of Directors.

3.12 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.

ARTICLE IV

CAPITAL STOCK

4.1 Issuance of Stock. Subject to the provisions of the Certificate of Incorporation, the whole or any part of any unissued balance of the authorized capital stock of the corporation or the whole or any part of any shares of the authorized capital stock of the corporation held in the corporation's treasury may be issued, sold, transferred or otherwise disposed of by vote of the Board of Directors in such manner, for such lawful consideration and on such terms as the Board of Directors may determine.

4.2 Stock Certificates; Uncertificated Shares. The shares of the corporation shall be represented by certificates, provided that the Board of Directors may provide by resolution or resolutions that some or all of any or all classes or series of the corporation's stock shall be uncertificated shares. Every holder of stock of the corporation represented by certificates shall be entitled to have a certificate, in such form as may be prescribed by law and by the Board of Directors, representing the number of shares held by such holder registered in certificate form. Each such certificate shall be signed in a manner that complies with Section 158 of the General Corporation Law of the State of Delaware.

Each certificate for shares of stock which are subject to any restriction on transfer pursuant to the Certificate of Incorporation, these By-laws, applicable securities laws or any agreement among any number of stockholders or among such holders and the corporation shall have conspicuously noted on the face or back of the certificate either the full text of the restriction or a statement of the existence of such restriction.

If the corporation shall be authorized to issue more than one class of stock or more than one series of any class, the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of each certificate representing shares of such class or series of stock, provided that in lieu of the foregoing requirements there may be set forth on the face or back of each certificate representing shares of such class or series of stock a statement that the corporation will furnish without charge to each stockholder who so requests a copy of the full text of the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

Within a reasonable time after the issuance or transfer of uncertificated shares, the corporation shall send to the registered owner thereof a written notice containing the information required to be set forth or stated on certificates pursuant to Sections 151, 202(a) or 218(a) of the General Corporation Law of the State of Delaware or, with respect to Section 151 of the General Corporation Law of the State of Delaware, a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

4.3 Transfers. Shares of stock of the corporation shall be transferable in the manner prescribed by law and in these By-laws. Transfers of shares of stock of the corporation shall be made only on the books of the corporation or by transfer agents designated to transfer shares of stock of the corporation. Subject to applicable law, shares of stock represented by certificates shall be transferred only on the books of the corporation by the surrender to the corporation or its transfer agent of the certificate representing such shares properly endorsed or accompanied by a written assignment or power of attorney properly executed, and with such proof of authority or the authenticity of signature as the corporation or its transfer agent may reasonably require. Except as may be otherwise required by law, by the Certificate of Incorporation or by these By-laws, the corporation shall be entitled to treat the record holder of stock as shown on its books as the owner of such stock for all purposes, including the payment of dividends and the right to vote with respect to such stock, regardless of any transfer, pledge or other disposition of such stock until the shares have been transferred on the books of the corporation in accordance with the requirements of these By-laws.

4.4 Lost, Stolen or Destroyed Certificates. The corporation may issue a new certificate of stock in place of any previously issued certificate alleged to have been lost, stolen or destroyed, upon such terms and conditions as the Board of Directors may prescribe, including the presentation of reasonable evidence of such loss, theft or destruction and the giving of such indemnity and posting of such bond as the Board of Directors may require for the protection of the corporation or any transfer agent or registrar.

4.5 Record Date. The Board of Directors may fix in advance a date as a record date for the determination of the stockholders entitled to notice of or to vote at any meeting of stockholders or to express consent (or dissent) to corporate action without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action. Such record date shall not precede the date on which the resolution fixing the record date is adopted, and such record date shall not be more than 60 nor less than 10 days before the date of such meeting, nor more than 10 days after the date of adoption of a record date for a consent without a meeting, nor more than 60 days prior to any other action to which such record date relates.

If no record date is fixed, 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. If no record date is fixed, the record date for determining stockholders entitled to express consent to corporate action without a meeting, when no prior action by the Board of Directors is necessary, shall be the day on which the first consent is properly delivered to the corporation. If no record date is fixed, 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 to such purpose.

A determination of stockholders of record entitled to notice of or to vote at a 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.

4.6 Regulations. The issue, transfer, conversion and registration of shares of stock of the corporation shall be governed by such other regulations as the Board of Directors may establish.

ARTICLE V

GENERAL PROVISIONS

5.1 Fiscal Year. Except as from time to time otherwise designated by the Board of Directors, the fiscal year of the corporation shall begin on the first day of January of each year and end on the last day of December in each year.

5.2 Corporate Seal. The corporate seal shall be in such form as shall be approved by the Board of Directors.

5.3 Waiver of Notice. Whenever notice is required to be given by law, by the Certificate of Incorporation or by these By-laws, a written waiver, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before, at or after the time of the event for which notice is to be given, shall be deemed equivalent to notice required to be given to such person. Neither the business nor the purpose of any meeting need be specified in any such waiver. 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.

5.4 Voting of Securities. Except as the Board of Directors may otherwise designate, the Chief Executive Officer, the President or the Treasurer may waive notice of, vote, or appoint any person or persons to vote, on behalf of the corporation at, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for this corporation (with or without power of substitution) at, any meeting of stockholders or securityholders of any other entity, the securities of which may be held by this corporation.

5.5 Evidence of Authority. A certificate by the Secretary, or an Assistant Secretary, or a temporary Secretary, as to any action taken by the stockholders, directors, a committee or any officer or representative of the corporation shall as to all persons who rely on the certificate in good faith be conclusive evidence of such action.

5.6 Certificate of Incorporation. All references in these By-laws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the corporation, as amended and in effect from time to time.

5.7 Severability. Any determination that any provision of these By-laws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these By-laws.

5.8 Pronouns. All pronouns used in these By-laws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

ARTICLE VI

AMENDMENTS

6.1 By the Board of Directors. These By-laws may be altered, amended or repealed, in whole or in part, or new by-laws may be adopted by the Board of Directors.

6.2 By the Stockholders. These By-laws may be altered, amended or repealed, in whole or in part, or new by-laws may be adopted by the affirmative vote of the holders of a majority of the shares of the capital stock of the corporation issued and outstanding and entitled to vote at any annual meeting of stockholders, or at any special meeting of stockholders, provided notice of such alteration, amendment, repeal or adoption of new by-laws shall have been stated in the notice of such special meeting.

FOURTH AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

THIS FOURTH AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT (the "**Agreement**") is made as of February 9, 2018, by and among Evelo Biosciences, Inc., a Delaware corporation (the "**Company**"), and each of the investors listed on Schedule A hereto (each, an "**Investor**," and together with any subsequent investors, or transferees, who become parties hereto as "Investors" pursuant to Subsection 6.9, the "**Investors**").

WHEREAS, certain of the Investors (the "**Existing Investors**") possess registration rights, information rights, rights of first offer, and other rights pursuant to a Third Amended and Restated Investors' Rights Agreement, dated as of January 5, 2017, among the Company and such Investors (the "**Prior Agreement**");

WHEREAS, the Existing Investors desire to amend and restate the Prior Agreement in its entirety and to accept the rights created pursuant to this Agreement in lieu of the rights granted to them under the Prior Agreement; and

WHEREAS, concurrently with the execution of this Agreement, the Company and certain of the Investors are entering into a Series C Preferred Stock Purchase Agreement (as the same may be amended and/or restated from time to time, the "**Purchase Agreement**"), pursuant to which such Investors have agreed to purchase shares of Series C Preferred Stock (as defined below).

NOW, THEREFORE, the Company and the Existing Investors hereby agree to amend and restate the Prior Agreement in its entirety as set forth herein, and all of the parties hereto further agree as follows:

1. **Definitions.** For purposes of this Agreement:

1.1 "**Affiliate**" means, with respect to any specified Person, any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including without limitation any general partner, managing member, officer or director of such Person or any venture capital or other investment fund now or hereafter existing that is controlled by one or more general partners or managing members of, or shares the same management company or investment advisor with, such Person.

1.2 "**Common Stock**" means shares of the Company's common stock, par value \$0.001 per share.

1.3 "**Damages**" means any loss, damage, claim, or liability (joint or several) to which a party hereto may become subject under the Securities Act, the Exchange Act, or other federal or state law, insofar as such loss, damage, claim, or liability (or any action in respect thereof) arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (ii) an omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (iii) any violation or alleged violation by the indemnifying party (or any of its agents or Affiliates) of the Securities Act, the Exchange Act, any state securities law, or any rule or regulation promulgated under the Securities Act, the Exchange Act, or any state securities law.

1.4 “**Derivative Securities**” means any securities or rights convertible into, or exercisable or exchangeable for (in each case, directly or indirectly), Common Stock, including options and warrants.

1.5 “**Exchange Act**” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

1.6 “**Excluded Registration**” means (i) a registration relating to the sale of securities to employees of the Company or a subsidiary pursuant to a stock option, stock purchase, or similar plan; (ii) a registration relating to an SEC Rule 145 transaction; (iii) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities; or (iv) a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered.

1.7 “**Form S-1**” means such form under the Securities Act as in effect on the date hereof or any successor registration form under the Securities Act subsequently adopted by the SEC.

1.8 “**Form S-3**” means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits incorporation of substantial information by reference to other documents filed by the Company with the SEC.

1.9 “**GAAP**” means generally accepted accounting principles in the United States.

1.10 “**Holder**” means any holder of Registrable Securities who is a party to this Agreement.

1.11 “**Immediate Family Member**” means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law or sister-in-law, including adoptive relationships, of a natural person referred to herein.

1.12 “**Initiating Holders**” means, collectively, Holders who properly initiate a registration request under this Agreement.

1.13 “**IPO**” means the Company’s first underwritten public offering of its Common Stock under the Securities Act.

1.14 “**Key Employee**” means any executive-level employee (including division director and vice president-level positions) as well as any employee who, either alone or in concert with others, develops, invents, programs, or designs any Company Intellectual Property (as defined in the Purchase Agreement).

1.15 “**Major Investor**” means any Investor that, individually or together with such Investor’s Affiliates, holds at least 862,068 shares of Series C Preferred Stock (as adjusted for any stock split, stock dividend, combination, or other recapitalization or reclassification effected after the date hereof).

1.16 “**New Securities**” means, collectively, equity securities of the Company, whether or not currently authorized, as well as rights, options, or warrants to purchase such equity securities, or securities of any type whatsoever that are, or may become, convertible or exchangeable into or exercisable for such equity securities.

1.17 “**Person**” means any individual, corporation, partnership, trust, limited liability company, association or other entity.

1.18 “**Preferred Director**” means any director of the Company that the holders of record of the Preferred Stock are entitled to elect as a separate class pursuant to the Company’s Certificate of Incorporation.

1.19 “**Preferred Stock**” means shares of Series A Preferred Stock, Series A-1 Preferred Stock, Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series B Preferred Stock and Series C Preferred Stock.

1.20 “**Registrable Securities**” means (i) the Common Stock issuable or issued upon conversion of the Preferred Stock; (ii) any Common Stock, or any Common Stock issued or issuable (directly or indirectly) upon conversion and/or exercise of any other securities of the Company, held by the Investors as of the date hereof or acquired by the Investors after the date hereof; and (iii) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the shares referenced in clause (i) and (ii) above; excluding in all cases, however, any Registrable Securities sold by a Person in a transaction in which the applicable rights under this Agreement are not assigned pursuant to Subsection 6.1, and excluding for purposes of Section 2 any shares for which registration rights have terminated pursuant to Subsection 2.13 of this Agreement.

1.21 “**Registrable Securities then outstanding**” means the number of shares determined by adding the number of shares of outstanding Common Stock that are Registrable Securities and the number of shares of Common Stock issuable (directly or indirectly) pursuant to then exercisable and/or convertible securities that are Registrable Securities.

1.22 “**Restricted Securities**” means the securities of the Company required to be notated with the legend set forth in Subsection 2.12(b) hereof.

1.23 “**SEC**” means the Securities and Exchange Commission.

1.24 “**SEC Rule 144**” means Rule 144 promulgated by the SEC under the Securities Act.

1.25 “**SEC Rule 145**” means Rule 145 promulgated by the SEC under the Securities Act.

1.26 “**Securities Act**” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

1.27 “**Selling Expenses**” means all underwriting discounts, selling commissions, and stock transfer taxes applicable to the sale of Registrable Securities, and fees and disbursements of counsel for any Holder, except for the fees and disbursements of the Selling Holder Counsel borne and paid by the Company as provided in Subsection 2.6.

1.28 “**Series A Preferred Stock**” means shares of the Company’s Series A Preferred Stock, par value \$0.001 per share.

1.29 “**Series A-1 Preferred Stock**” means shares of the Company’s Series A-1 Preferred Stock, par value \$0.001 per share.

1.30 “**Series A-2 Preferred Stock**” means shares of the Company’s Series A-2 Preferred Stock, par value \$0.001 per share.

1.31 “**Series A-3 Preferred Stock**” means shares of the Company’s Series A-3 Preferred Stock, par value \$0.001 per share.

1.32 “**Series B Preferred Stock**” means shares of the Company’s Series B Preferred Stock, par value \$0.001 per share.

1.33 “**Series C Preferred Stock**” means shares of the Company’s Series C Preferred Stock, par value \$0.001 per share.

2. Registration Rights. The Company covenants and agrees as follows:

2.1 Demand Registration.

(a) Form S-1 Demand. If at any time after the earlier of (i) five (5) years after the date of this Agreement or (ii) one hundred eighty (180) days after the effective date of the registration statement for the IPO, the Company receives a request from Holders of a majority of the Registrable Securities then outstanding that the Company file a Form S-1 registration statement for which the anticipated aggregate offering price would exceed \$5,000,000, then the Company shall (i) within ten (10) days after the date such request is given, give notice thereof (the “**Demand Notice**”) to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within sixty (60) days after the date such request is given by the Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Subsection 2.1(c) and Subsection 2.3.

(b) Form S-3 Demand. If at any time when it is eligible to use a Form S-3 registration statement, the Company receives a request from Holders of at least thirty percent (30%) of the Registrable Securities then outstanding that the Company file a Form S-3 registration statement with respect to outstanding Registrable Securities of such Holders having an anticipated

aggregate offering price of at least \$5,000,000, then the Company shall (i) within ten (10) days after the date such request is given, give a Demand Notice to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within forty-five (45) days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Subsection 2.1(c) and Subsection 2.3.

(c) Notwithstanding the foregoing obligations, if the Company furnishes to Holders requesting a registration pursuant to this Subsection 2.1 a certificate signed by the Company's chief executive officer stating that in the good faith judgment of the Company's Board of Directors it would be materially detrimental to the Company and its stockholders for such registration statement to either become effective or remain effective for as long as such registration statement otherwise would be required to remain effective, because such action would (i) materially interfere with a significant acquisition, corporate reorganization, or other similar transaction involving the Company; (ii) require premature disclosure of material information that the Company has a bona fide business purpose for preserving as confidential; or (iii) render the Company unable to comply with requirements under the Securities Act or Exchange Act, then the Company shall have the right to defer taking action with respect to such filing, and any time periods with respect to filing or effectiveness thereof shall be tolled correspondingly, for a period of not more than ninety (90) days after the request of the Initiating Holders is given; provided, however, that the Company may not invoke this right more than once in any twelve (12) month period; and provided further that the Company shall not register any securities for its own account or that of any other stockholder during such ninety (90) day period other than an Excluded Registration.

(d) The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Subsection 2.1(a)(i) during the period that is sixty (60) days before the Company's good faith estimate of the date of filing of, and ending on a date that is one hundred eighty (180) days after the effective date of, a Company-initiated registration, provided, that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; (ii) after the Company has effected two registrations pursuant to Subsection 2.1(a); or (iii) if the Initiating Holders propose to dispose of shares of Registrable Securities that may be immediately registered on Form S-3 pursuant to a request made pursuant to Subsection 2.1(b). The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Subsection 2.1(b) (i) during the period that is thirty (30) days before the Company's good faith estimate of the date of filing of, and ending on a date that is ninety (90) days after the effective date of, a Company-initiated registration, provided, that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; or (ii) if the Company has effected two registrations pursuant to Subsection 2.1(b) within the twelve (12) month period immediately preceding the date of such request. A registration shall not be counted as "effected" for purposes of this Subsection 2.1(d) until such time as the applicable registration statement has been declared effective by the SEC, unless the Initiating Holders withdraw their request for such registration, elect not to pay the registration expenses therefor, and forfeit their right to one demand registration statement pursuant to Subsection 2.6, in which case such withdrawn registration statement shall be counted as "effected" for purposes of this Subsection 2.1(d).

2.2 Company Registration. If the Company proposes to register (including, for this purpose, a registration effected by the Company for stockholders other than the Holders) any of its securities under the Securities Act in connection with the public offering of such securities solely for cash (other than in an Excluded Registration or the IPO), the Company shall, at such time, promptly give each Holder notice of such registration. Upon the request of each Holder given within twenty (20) days after such notice is given by the Company, the Company shall, subject to the provisions of Subsection 2.3, cause to be registered all of the Registrable Securities that each such Holder has requested to be included in such registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Subsection 2.2 before the effective date of such registration, whether or not any Holder has elected to include Registrable Securities in such registration. The expenses (other than Selling Expenses) of such withdrawn registration shall be borne by the Company in accordance with Subsection 2.6.

2.3 Underwriting Requirements.

(a) If, pursuant to Subsection 2.1, the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to Subsection 2.1, and the Company shall include such information in the Demand Notice. The underwriter(s) will be selected by a majority in interest of the Initiating Holders, subject only to the reasonable approval of the Company. In such event, the right of any Holder to include such Holder's Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in Subsection 2.4(e)) enter into an underwriting agreement in customary form with the underwriter(s) selected for such underwriting. Notwithstanding any other provision of this Subsection 2.3, if the managing underwriter(s) advise(s) the Initiating Holders in writing that marketing factors require a limitation on the number of shares to be underwritten, then the Initiating Holders shall so advise all Holders of Registrable Securities that otherwise would be underwritten pursuant hereto, and the number of Registrable Securities that may be included in the underwriting shall be allocated among such Holders of Registrable Securities, including the Initiating Holders, in proportion (as nearly as practicable) to the number of Registrable Securities owned by each Holder or in such other proportion as shall mutually be agreed to by all such selling Holders; provided, however, that the number of Registrable Securities held by the Holders to be included in such underwriting shall not be reduced unless all other securities are first entirely excluded from the underwriting. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest one hundred (100) shares.

(b) In connection with any offering involving an underwriting of shares of the Company's capital stock pursuant to Subsection 2.2, the Company shall not be required to include any of the Holders' Registrable Securities in such underwriting unless the Holders accept the terms of the underwriting as agreed upon between the Company and its underwriters, and then only in such quantity as the underwriters in their sole discretion determine will not jeopardize the success of the offering by the Company. If the total number of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the number of securities to be sold (other than by the Company) that the underwriters in their reasonable

discretion determine is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters and the Company in their sole discretion determine will not jeopardize the success of the offering. If the underwriters determine that less than all of the Registrable Securities requested to be registered can be included in such offering, then the Registrable Securities that are included in such offering shall be allocated among the selling Holders in proportion (as nearly as practicable to) the number of Registrable Securities owned by each selling Holder or in such other proportions as shall mutually be agreed to by all such selling Holders. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest 100 shares. Notwithstanding the foregoing, in no event shall (i) the number of Registrable Securities included in the offering be reduced unless all other securities (other than securities to be sold by the Company) are first entirely excluded from the offering, or (ii) the number of Registrable Securities included in the offering be reduced below thirty percent (30%) of the total number of securities included in such offering, unless such offering is the IPO, in which case the selling Holders may be excluded further if the underwriters make the determination described above and no other stockholder's securities are included in such offering. For purposes of the provision in this Subsection 2.3(b) concerning apportionment, for any selling Holder that is a partnership, limited liability company, or corporation, the partners, members, retired partners, retired members, stockholders, and Affiliates of such Holder, or the estates and Immediate Family Members of any such partners, retired partners, members, and retired members and any trusts for the benefit of any of the foregoing Persons, shall be deemed to be a single "selling Holder," and any pro rata reduction with respect to such "selling Holder" shall be based upon the aggregate number of Registrable Securities owned by all Persons included in such "selling Holder," as defined in this sentence.

(c) For purposes of Subsection 2.1, a registration shall not be counted as "effected" if, as a result of an exercise of the underwriter's cutback provisions in Subsection 2.3(a), fewer than fifty percent (50%) of the total number of Registrable Securities that Holders have requested to be included in such registration statement are actually included.

2.4 Obligations of the Company. Whenever required under this Section 2 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its commercially reasonable efforts to cause such registration statement to become effective and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to one hundred twenty (120) days or, if earlier, until the distribution contemplated in the registration statement has been completed; provided, however, that (i) such one hundred twenty (120) day period shall be extended for a period of time equal to the period the Holder refrains, at the request of an underwriter of Common Stock (or other securities) of the Company, from selling any securities included in such registration, and (ii) in the case of any registration of Registrable Securities on Form S-3 that are intended to be offered on a continuous or delayed basis, subject to compliance with applicable SEC rules, such one hundred twenty (120) day period shall be extended, if necessary, to keep the registration statement effective until all such Registrable Securities are sold;

(b) prepare and file with the SEC such amendments and supplements to such registration statement, and the prospectus used in connection with such registration statement, as may be necessary to comply with the Securities Act in order to enable the disposition of all securities covered by such registration statement;

(c) furnish to the selling Holders such numbers of copies of a prospectus, including a preliminary prospectus, as required by the Securities Act, and such other documents as the Holders may reasonably request in order to facilitate their disposition of their Registrable Securities;

(d) use its commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or blue-sky laws of such jurisdictions as shall be reasonably requested by the selling Holders; provided that the Company shall not be required to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service in such jurisdiction and except as may be required by the Securities Act;

(e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriter(s) of such offering;

(f) use its commercially reasonable efforts to cause all such Registrable Securities covered by such registration statement to be listed on a national securities exchange or trading system and each securities exchange and trading system (if any) on which similar securities issued by the Company are then listed;

(g) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and provide a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(h) promptly make available for inspection by the selling Holders, any managing underwriter(s) participating in any disposition pursuant to such registration statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the selling Holders, all financial and other records, pertinent corporate documents, and properties of the Company, and cause the Company's officers, directors, employees, and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant, or agent, in each case, as necessary or advisable to verify the accuracy of the information in such registration statement and to conduct appropriate due diligence in connection therewith;

(i) notify each selling Holder, promptly after the Company receives notice thereof, of the time when such registration statement has been declared effective or a supplement to any prospectus forming a part of such registration statement has been filed; and

(j) after such registration statement becomes effective, notify each selling Holder of any request by the SEC that the Company amend or supplement such registration statement or prospectus.

In addition, the Company shall ensure that, at all times after any registration statement covering a public offering of securities of the Company under the Securities Act shall have become effective, its insider trading policy shall provide that the Company's directors may implement a trading program under Rule 10b5-1 of the Exchange Act.

2.5 Furnish Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 2 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as is reasonably required to effect the registration of such Holder's Registrable Securities.

2.6 Expenses of Registration. All expenses (other than Selling Expenses) incurred in connection with registrations, filings or qualifications pursuant to Section 2, including all registration, filing, and qualification fees; printers' and accounting fees; fees and disbursements of counsel for the Company; and the reasonable fees and disbursements of one counsel for the selling Holders selected by the Holders of a majority of the Registrable Securities to be registered ("**Selling Holder Counsel**"), shall be borne and paid by the Company; provided, however, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Subsection 2.1 if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered (in which case all selling Holders shall bear such expenses pro rata based upon the number of Registrable Securities that were to be included in the withdrawn registration), unless the Holders of a majority of the Registrable Securities agree to forfeit their right to one registration pursuant to Subsection 2.1(a) or Subsection 2.1(b), as the case may be; provided further that if, at the time of such withdrawal, the Holders shall have learned of a material adverse change in the condition, business, or prospects of the Company from that known to the Holders at the time of their request and have withdrawn the request with reasonable promptness after learning of such information then the Holders shall not be required to pay any of such expenses and shall not forfeit their right to one registration pursuant to Subsection 2.1(a) or Subsection 2.1(b). All Selling Expenses relating to Registrable Securities registered pursuant to this Section 2 shall be borne and paid by the Holders pro rata on the basis of the number of Registrable Securities registered on their behalf.

2.7 Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any registration pursuant to this Agreement as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

2.8 Indemnification. If any Registrable Securities are included in a registration statement under this Section 2:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each selling Holder and the partners, members, officers, directors and stockholders of each such Holder; legal counsel and accountants for each such Holder; any underwriter (as defined in the Securities Act) for each such Holder; and each Person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any Damages, and the Company will pay to each such Holder, underwriter, controlling Person or other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Subsection 2.8(a) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable for any Damages to the extent that they arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of any such Holder, underwriter, controlling Person or other aforementioned Person expressly for use in connection with such registration.

(b) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company, and each of its directors, each of its officers who has signed the registration statement, each Person (if any), who controls the Company within the meaning of the Securities Act, legal counsel and accountants for the Company, any underwriter (as defined in the Securities Act), any other Holder selling securities in such registration statement and any controlling Person of any such underwriter or other Holder, against any Damages, in each case only to the extent that such Damages arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of such selling Holder expressly for use in connection with such registration; and each such selling Holder will pay to the Company and each other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Subsection 2.8(b) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; and provided further that in no event shall the aggregate amounts payable by any Holder by way of indemnity or contribution under Subsections 2.8(b) and 2.8(d) exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of fraud or willful misconduct by such Holder.

(c) Promptly after receipt by an indemnified party under this Subsection 2.8 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Subsection 2.8, give the indemnifying party notice of the commencement thereof. The indemnifying party shall have the right to participate in such action and, to the extent the indemnifying party so desires, participate jointly with any other indemnifying party to which notice has been given, and to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel

in such action. The failure to give notice to the indemnifying party within a reasonable time of the commencement of any such action shall relieve such indemnifying party of any liability to the indemnified party under this Subsection 2.8, to the extent that such failure materially prejudices the indemnifying party's ability to defend such action. The failure to give notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Subsection 2.8.

(d) To provide for just and equitable contribution to joint liability under the Securities Act in any case in which either (i) any party otherwise entitled to indemnification hereunder makes a claim for indemnification pursuant to this Subsection 2.8 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case, notwithstanding the fact that this Subsection 2.8 provides for indemnification in such case, or (ii) contribution under the Securities Act may be required on the part of any party hereto for which indemnification is provided under this Subsection 2.8, then, and in each such case, such parties will contribute to the aggregate losses, claims, damages, liabilities or expenses to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of each of the indemnifying party and the indemnified party in connection with the statements, omissions, or other actions that resulted in such loss, claim, damage, liability or expense, as well as to reflect any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or allegedly untrue statement of a material fact, or the omission or alleged omission of a material fact, relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; provided, however, that, in any such case, (x) no Holder will be required to contribute any amount in excess of the public offering price of all such Registrable Securities offered and sold by such Holder pursuant to such registration statement, and (y) no Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and provided further that in no event shall a Holder's liability pursuant to this Subsection 2.8(d), when combined with the amounts paid or payable by such Holder pursuant to Subsection 2.8(b), exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of willful misconduct or fraud by such Holder.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) Unless otherwise superseded by an underwriting agreement entered into in connection with the underwritten public offering, the obligations of the Company and Holders under this Subsection 2.8 shall survive the completion of any offering of Registrable Securities in a registration under this Section 2, and otherwise shall survive the termination of this Agreement.

2.9 Reports Under Exchange Act. With a view to making available to the Holders the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company shall:

(a) make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144, at all times after the effective date of the registration statement filed by the Company for the IPO;

(b) use commercially reasonable efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after the Company has become subject to such reporting requirements); and

(c) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after ninety (90) days after the effective date of the registration statement filed by the Company for the IPO), the Securities Act and the Exchange Act (at any time after the Company has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S 3 (at any time after the Company so qualifies); (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company; and (iii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration (at any time after the Company has become subject to the reporting requirements under the Exchange Act) or pursuant to Form S-3 (at any time after the Company so qualifies to use such form).

2.10 Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of at least fifty percent (50%) of the Registrable Securities then outstanding, enter into any agreement with any holder or prospective holder of any securities of the Company that (i) would provide to such holder the right to include securities in any registration on other than a subordinate basis after all Holders have had the opportunity to include in the registration and offering all shares of Registrable Securities that they wish to so include or (ii) allow such holder or prospective holder to initiate a demand for registration of any securities held by such holder or prospective holder; provided that this limitation shall not apply to any additional Investor who becomes a party to this Agreement in accordance with Subsection 6.9.

2.11 "Market Stand off" Agreement. Each Holder hereby agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the IPO and ending on the date specified by the Company and the managing underwriter (such period not to exceed one hundred eighty (180) days plus such additional period up to eighteen (18) additional days as may be requested by the Company or an underwriter to accommodate regulatory restrictions on (1) the publication or other distribution of research reports and (2) analyst recommendations and opinions, including, but not limited to, the restrictions contained in FINRA Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto), (i) lend; 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 or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock held immediately before the effective date of the registration statement for such offering or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of such securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash, or otherwise. The foregoing provisions of this Subsection 2.11 shall apply only to the IPO, shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement for such IPO and shall be applicable to the Holders only if all officers and directors of the Company and holders of at least five percent (5%) of the outstanding Common Stock (after giving effect to conversion into Common Stock of all outstanding shares of Preferred Stock) are subject to the same restrictions. The underwriters in connection with such registration are intended third party beneficiaries of this Subsection 2.11 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Each Holder further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Subsection 2.11 or that are necessary to give further effect thereto.

2.12 Restrictions on Transfer.

(a) The Preferred Stock and the Registrable Securities shall not be sold, pledged, or otherwise transferred in violation of this Agreement, and the Company shall not recognize and shall issue stop-transfer instructions to its transfer agent with respect to any such sale, pledge, or transfer, except upon the conditions specified in this Agreement, which conditions are intended to ensure compliance with the provisions of the Securities Act. A transferring Holder will cause any proposed purchaser, pledgee, or transferee of the Preferred Stock and the Registrable Securities held by such Holder to agree to take and hold such securities subject to the provisions and upon the conditions specified in this Agreement.

(b) Each certificate, instrument or book entry representing (i) the Preferred Stock, (ii) the Registrable Securities, and (iii) any other securities issued in respect of the securities referenced in clauses (i) and (ii), upon any stock split, stock dividend, recapitalization, merger, consolidation, or similar event, shall (unless otherwise permitted by the provisions of Subsection 2.12(c)) be notated with a legend substantially in the following form:

THE SECURITIES REPRESENTED HEREBY HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED. SUCH SHARES MAY NOT BE SOLD, PLEDGED, OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR A VALID EXEMPTION FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF SAID ACT.

THE SECURITIES REPRESENTED HEREBY MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

The Holders consent to the Company making a notation in its records and giving instructions to any transfer agent of the Restricted Securities in order to implement the restrictions on transfer set forth in this Subsection 2.12.

(c) The holder of such Restricted Securities, by acceptance thereof, agrees to comply in all respects with the provisions of this Section 2. Before any proposed sale, pledge or transfer of any Restricted Securities, unless there is in effect a registration statement under the Securities Act covering the proposed transaction, the Holder thereof shall give notice to the Company of such Holder's intention to effect such sale, pledge or transfer. Each such notice shall describe the manner and circumstances of the proposed sale, pledge or transfer in sufficient detail and, if reasonably requested by the Company, shall be accompanied at such Holder's expense by either (i) a written opinion of legal counsel who shall, and whose legal opinion shall, be reasonably satisfactory to the Company, addressed to the Company, to the effect that the proposed transaction may be effected without registration under the Securities Act; (ii) a "no action" letter from the SEC to the effect that the proposed sale, pledge or transfer of such Restricted Securities without registration will not result in a recommendation by the staff of the SEC that action be taken with respect thereto; or (iii) any other evidence reasonably satisfactory to counsel to the Company to the effect that the proposed sale, pledge or transfer of the Restricted Securities may be effected without registration under the Securities Act, whereupon the Holder of such Restricted Securities shall be entitled to sell, pledge or transfer such Restricted Securities in accordance with the terms of the notice given by the Holder to the Company. The Company will not require such a legal opinion or "no action" letter (x) in any transaction in compliance with SEC Rule 144 or (y) in any transaction in which such Holder distributes Restricted Securities to an Affiliate of such Holder for no consideration; provided that each transferee agrees in writing to be subject to the terms of this Subsection 2.12. Each certificate, instrument or book entry representing the Restricted Securities transferred as above provided shall be notated with, except if such transfer is made pursuant to SEC Rule 144, the appropriate restrictive legend set forth in Subsection 2.12(b), except that such certificate, instrument or book entry shall not be notated with such restrictive legend if, in the opinion of counsel for such Holder and the Company, such legend is not required in order to establish compliance with any provisions of the Securities Act.

2.13 Termination of Registration Rights. The right of any Holder to request registration or inclusion of Registrable Securities in any registration pursuant to Subsection 2.1 or Subsection 2.2 shall terminate upon the earliest to occur of:

(a) immediately before the closing of a Deemed Liquidation Event, as such term is defined in the Company's Certificate of Incorporation;

(b) such time after the IPO as SEC Rule 144 or another similar exemption under the Securities Act is available for the sale of all of such Holder's shares without limitation during a three-month period without registration; and

(c) the seventh (7th) anniversary of the IPO.

3. Information and Observer Rights.

3.1 Delivery of Financial Statements. The Company shall deliver to each Major Investor, provided that the Board of Directors has not reasonably determined that such Major Investor is (or, in the case of a Major Investor that is an individual, is employed by or serves as a consultant to) a competitor of the Company:

(a) as soon as practicable, but in any event within one hundred twenty (120) days after the end of each fiscal year of the Company, (i) a balance sheet as of the end of such year, (ii) statements of income and of cash flows for such year, and a comparison between (x) the actual amounts as of and for such fiscal year and (y) the comparable amounts for the prior year and as included in the Budget (as defined in Subsection 3.1(e)) for such year, with an explanation of any material differences between such amounts and a schedule as to the sources and applications of funds for such year, and (iii) a statement of stockholders' equity as of the end of such year, all such financial statements audited and certified by independent public accountants selected by the Company and approved by the Board of Directors, including the Preferred Directors;

(b) as soon as practicable, but in any event within forty-five (45) days after the end of each of the first three (3) quarters of each fiscal year of the Company, unaudited statements of income and of cash flows for such fiscal quarter, and an unaudited balance sheet and a statement of stockholders' equity as of the end of such fiscal quarter, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments and (ii) not contain all notes thereto that may be required in accordance with GAAP);

(c) as soon as practicable, but in any event within forty-five (45) days after the end of each of the first three (3) quarters of each fiscal year of the Company, a statement showing the number of shares of each class and series of capital stock and securities convertible into or exercisable for shares of capital stock outstanding at the end of the period, the Common Stock issuable upon conversion or exercise of any outstanding securities convertible or exercisable for Common Stock and the exchange ratio or exercise price applicable thereto, and the number of shares of issued stock options and stock options not yet issued but reserved for issuance, if any, all in sufficient detail as to permit any Major Investor to calculate its percentage equity ownership in the Company, and certified by the chief financial officer or chief executive officer of the Company as being true, complete and correct;

(d) as soon as practicable, but in any event thirty (30) days before the end of each fiscal year, a budget and business plan for the next fiscal year (collectively, the "**Budget**"), approved by the Board of Directors and prepared on a quarterly basis, including balance sheets, income statements, and statements of cash flow for such quarters and, promptly after prepared, any other budgets or revised budgets prepared by the Company; and

(e) such other information relating to the financial condition, business, prospects or corporate affairs of the Company as any Major Investor may from time to time reasonably request; provided, however, that the Company shall not be obligated under this Subsection 3.1 to provide information (i) that the Company reasonably determines in good faith to be a trade secret or confidential information (unless covered by an enforceable confidentiality agreement, in form acceptable to the Company) or (ii) the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

If, for any period, the Company has any subsidiary whose accounts are consolidated with those of the Company, then in respect of such period the financial statements delivered pursuant to the foregoing sections shall be the consolidated and consolidating financial statements of the Company and all such consolidated subsidiaries.

Notwithstanding anything else in this Subsection 3.1 to the contrary, the Company may cease providing the information set forth in this Subsection 3.1 during the period starting with the date sixty (60) days before the Company's good-faith estimate of the date of filing of a registration statement if it reasonably concludes it must do so to comply with the SEC rules applicable to such registration statement and related offering; provided that the Company's covenants under this Subsection 3.1 shall be reinstated at such time as the Company is no longer actively employing its commercially reasonable efforts to cause such registration statement to become effective.

3.2 Inspection. The Company shall permit each Major Investor (provided that the Board of Directors has not reasonably determined that such Major Investor is, or, in the case of a Major Investor that is an individual, is employed by or serves as a consultant to, a competitor of the Company), at such Major Investor's expense, to visit and inspect the Company's properties; examine its books of account and records; and discuss the Company's affairs, finances, and accounts with its officers, during normal business hours of the Company as may be reasonably requested by the Major Investor; provided, however, that the Company shall not be obligated pursuant to this Subsection 3.2 to provide access to any information that it reasonably and in good faith considers to be a trade secret or confidential information (unless covered by an enforceable confidentiality agreement, in form acceptable to the Company) or the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

3.3 Termination of Information Rights. The covenants set forth in Subsection 3.1 and Subsection 3.2 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) immediately before a Deemed Liquidation Event, as such term is defined in the Company's Certificate of Incorporation, whichever event occurs first.

3.4 Confidentiality. Each Investor agrees that such Investor will keep confidential and will not disclose, divulge or use for any purpose (other than to monitor its investment in the Company) any confidential information obtained from the Company pursuant to the terms of this Agreement (including notice of the Company's intention to file a registration statement), unless such confidential information (a) is known or becomes known to the public in general (other than as a result of a breach of this Subsection 3.4 by such Investor), (b) is or has been independently developed or conceived by any Investor without use of the Company's confidential information, or (c) is or has been made known or disclosed to any Investor by a third party without a breach of any obligation of confidentiality such third party may have to the Company; provided, however, that an Investor may disclose confidential information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with monitoring its investment in the Company; (ii) to any prospective

purchaser of any Registrable Securities from such Investor, if such prospective purchaser agrees to be bound by the provisions of this Subsection 3.4; (iii) to any existing or prospective Affiliate, partner, member, stockholder or wholly owned subsidiary of such Investor in the ordinary course of business, provided that such Investor informs such Person that such information is confidential and directs such Person to maintain the confidentiality of such information; or (iv) as may otherwise be required by law, provided that such Investor promptly notifies the Company of such disclosure and takes reasonable steps to minimize the extent of any such required disclosure.

4. Rights to Future Stock Issuances.

4.1 Right of First Offer. Subject to the terms and conditions of this Subsection 4.1 and applicable securities laws, if the Company proposes to offer or sell any New Securities, the Company shall first offer such New Securities to each Major Investor. A Major Investor shall be entitled to apportion the right of first offer hereby granted to it among itself and its Affiliates in such proportions as it deems appropriate.

(a) The Company shall give notice (the “**Offer Notice**”) to each Major Investor, stating (i) its bona fide intention to offer such New Securities, (ii) the number of such New Securities to be offered, and (iii) the price and terms, if any, upon which it proposes to offer such New Securities.

(b) By notification to the Company within twenty (20) days after the Offer Notice is given, each Major Investor may elect to purchase or otherwise acquire, at the price and on the terms specified in the Offer Notice, up to that portion of such New Securities which equals the proportion that the Common Stock then held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held, by such Major Investor bears to the total Common Stock of the Company then outstanding (assuming full conversion and/or exercise, as applicable, of all Preferred Stock and other Derivative Securities). At the expiration of such twenty (20) day period, the Company shall promptly notify each Major Investor that elects to purchase or acquire all the shares available to it (each, a “**Fully Exercising Investor**”) of any other Major Investor’s failure to do likewise. During the ten (10) day period commencing after the Company has given such notice, each Fully Exercising Investor may, by giving notice to the Company, elect to purchase or acquire, in addition to the number of shares specified above, up to that portion of the New Securities for which Major Investors were entitled to subscribe but that were not subscribed for by the Major Investors which is equal to the proportion that the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of Preferred Stock and any other Derivative Securities then held, by such Fully Exercising Investor bears to the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held, by all Fully Exercising Investors who wish to purchase such unsubscribed shares. The closing of any sale pursuant to this Subsection 4.1(b) shall occur within the later of ninety (90) days of the date that the Offer Notice is given and the date of initial sale of New Securities pursuant to Subsection 4.1(c).

(c) If all New Securities referred to in the Offer Notice are not elected to be purchased or acquired as provided in Subsection 4.1(b), the Company may, during the ninety (90) day period following the expiration of the periods provided in Subsection 4.1(b), offer and sell the remaining unsubscribed portion of such New Securities to any Person or Persons at a price not less than, and upon terms no more favorable to the offeree than, those specified in the Offer Notice. If the Company does not enter into an agreement for the sale of the New Securities within such period, or if such agreement is not consummated within thirty (30) days of the execution thereof, the right provided hereunder shall be deemed to be revived and such New Securities shall not be offered unless first reoffered to the Major Investors in accordance with this Subsection 4.1.

(d) The right of first offer in this Subsection 4.1 shall not be applicable to (i) Exempted Securities (as defined in the Company's Certificate of Incorporation) or (ii) shares of Series C Preferred Stock issued after the date hereof pursuant to the Purchase Agreement.

4.2 Termination. The covenants set forth in Subsection 4.1 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) immediately before a Deemed Liquidation Event, as such term is defined in the Company's Certificate of Incorporation, whichever event occurs first.

5. Additional Covenants.

5.1 Insurance. The Company shall use its commercially reasonable efforts to maintain in effect, from financially sound and reputable insurers, Directors and Officers liability insurance and term "key person" insurance on the Chief Executive Officer, each in an amount and on terms and conditions satisfactory to the Board of Directors, until such time as the Board of Directors determines that such insurance should be discontinued. The key person policy shall name the Company as loss payee, and neither policy shall be cancelable by the Company without prior approval by the Board of Directors including the Preferred Directors.

5.2 Employee Agreements. The Company will cause (i) each person now or hereafter employed by it or by any subsidiary (or engaged by the Company or any subsidiary as a consultant/independent contractor) with access to confidential information and/or trade secrets to enter into a nondisclosure and proprietary rights assignment agreement and (ii) each Key Employee to enter into a one (1) year noncompetition and nonsolicitation agreement, each in a form acceptable to the Investors holding a majority of the Registrable Securities. In addition, the Company shall not amend, modify, terminate, waive, or otherwise alter, in whole or in part, any of the above-referenced agreements, any noncompetition or nonsolicitation agreement or any restricted stock agreement between the Company and any employee, without the consent of the Board of Directors, including at least one of the Preferred Directors.

5.3 Employee Stock. Unless otherwise approved by the Board of Directors, including at least one of the Preferred Directors, all future employees and consultants of the Company who purchase, receive options to purchase, or receive awards of shares of the Company's capital stock after the date hereof shall be required to execute restricted stock or option agreements, as applicable, providing for (i) vesting of shares over a four (4) year period, with the first twenty-five percent (25%) of such shares vesting following twelve (12) months of continued employment or service, and the remaining shares vesting in equal quarterly installments over the following thirty-six (36) months, and (ii) a market stand-off provision substantially similar to that

in Subsection 2.11. In addition, unless otherwise approved by the Board of Directors, including at least one of the Preferred Directors, the Company shall retain a “right of first refusal” on employee transfers until the Company’s IPO and shall have the right to repurchase unvested shares at cost upon termination of employment of a holder of restricted stock.

5.4 Qualified Small Business Stock. The Company shall use commercially reasonable efforts to cause the shares of Preferred Stock issued on or prior to June 16, 2017 (the date of the last closing held under that certain Series B Preferred Stock Purchase Agreement, dated as of January 5, 2017, by and among the Company and the other parties thereto), as well as any shares into which such shares are converted, within the meaning of Section 1202(f) of the Internal Revenue Code (the “**Code**”), to constitute “qualified small business stock” as defined in Section 1202(c) of the Code; provided, however, that such requirement shall not be applicable if the Board of Directors of the Company determines, in its good-faith business judgment, that such qualification is inconsistent with the best interests of the Company. The Company shall submit to its stockholders (including the Investors) and to the Internal Revenue Service any reports that may be required under Section 1202(d)(1)(C) of the Code and the regulations promulgated thereunder. In addition, within twenty (20) business days after any Investor’s written request therefor, the Company shall, at its option, either (i) deliver to such Investor a written statement indicating whether (and what portion of) such Investor’s interest in the Company constitutes “qualified small business stock” as defined in Section 1202(c) of the Code or (ii) deliver to such Investor such factual information in the Company’s possession as is reasonably necessary to enable such Investor to determine whether (and what portion of) such Investor’s interest in the Company constitutes “qualified small business stock” as defined in Section 1202(c) of the Code.

5.5 Matters Requiring Investor Director Approval. So long as the holders of Preferred Stock are entitled to elect a Preferred Director, the Company hereby covenants and agrees with the Investors that it shall not, nor shall it permit any subsidiary to, without approval of the Board of Directors, which approval must include the affirmative vote of at least one of the Preferred Directors:

(a) make any loan or advance to, or own any stock or other securities of, any subsidiary or other corporation, partnership, or other entity unless it is wholly owned by the Company;

(b) make any loan or advance to any Person, including, without limitation, any employee or director of the Company or any subsidiary, except advances and similar expenditures in the ordinary course of business or under the terms of an employee stock or option plan approved by the Board of Directors, including at least one of the Preferred Directors;

(c) guarantee, directly or indirectly, any indebtedness except for trade accounts of the Company or any subsidiary arising in the ordinary course of business;

(d) make any investment inconsistent with any investment policy approved by the Board of Directors;

(e) incur any aggregate indebtedness in excess of \$250,000 that is not already included in a budget approved by the Board of Directors, other than trade credit incurred in the ordinary course of business;

(f) otherwise enter into or be a party to any transaction with any director, officer, or employee of the Company or any “associate” (as defined in Rule 12b-2 promulgated under the Exchange Act) of any such Person, except for transactions contemplated by this Agreement and the Purchase Agreement; transactions resulting in payments to or by the Company in an aggregate amount less than \$100,000 per year; or transactions made in the ordinary course of business and pursuant to reasonable requirements of the Company’s business and upon fair and reasonable terms that are approved by a majority of the Board of Directors;

(g) hire, terminate, or change the compensation of the executive officers, including approving any option grants or stock awards to executive officers;

(h) change the principal business of the Company, enter new lines of business, or exit the current line of business;

(i) sell, assign, license, pledge, or encumber material technology or intellectual property, other than licenses granted in the ordinary course of business;

(j) increase the shares of Common Stock reserved for issuance under the Company’s 2015 Stock Incentive Plan or adopt any other equity incentive plan; or

(k) enter into any corporate strategic relationship involving the payment, contribution, or assignment by the Company or to the Company of money or assets greater than \$250,000.

5.6 Board Matters. Unless otherwise determined by the vote of a majority of the directors then in office, the Board of Directors shall meet at least quarterly in accordance with an agreed-upon schedule, unless agreed by a majority of the Board of Directors, including at least one of the Preferred Directors. The Company shall reimburse the nonemployee directors for all reasonable out-of-pocket travel expenses incurred (consistent with the Company’s travel policy) in connection with attending meetings of the Board of Directors. The Company shall cause to be established, as soon as practicable after such request, and will maintain, an audit and compensation committee, each of which shall consist solely of non-management directors. Each non-employee director shall be entitled in such person’s discretion to be a member of any Board committee. Each committee of the Board of Directors shall include at least one Preferred Director.

5.7 Successor Indemnification. If the Company or any of its successors or assignees consolidates with or merges into any other Person and is not the continuing or surviving corporation or entity of such consolidation or merger, then to the extent necessary, proper provision shall be made so that the successors and assignees of the Company assume the obligations of the Company with respect to indemnification of members of the Board of Directors as in effect immediately before such transaction, whether such obligations are contained in the Company’s Bylaws, its Certificate of Incorporation, or elsewhere, as the case may be.

5.8 Indemnification Matters. The Company hereby acknowledges that one (1) or more of the directors nominated to serve on the Board of Directors by the Investors (each a “**Fund Director**”) may have certain rights to indemnification, advancement of expenses and/or insurance provided by one or more of the Investors and certain of their affiliates (collectively, the “**Fund Indemnitors**”). The Company hereby agrees (i) that it is the indemnitor of first resort (i.e., its obligations to any such Fund Director are primary and any obligation of the Fund Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by such Fund Director are secondary), (ii) that it shall be required to advance the full amount of expenses incurred by such Fund Director and shall be liable for the full amount of all expenses, judgments, penalties, fines and amounts paid in settlement by or on behalf of any such Fund Director to the extent legally permitted and as required by the Company’s Certificate of Incorporation or Bylaws of the Company (or any agreement between the Company and such Fund Director), without regard to any rights such Fund Director may have against the Fund Indemnitors, and, (iii) that it irrevocably waives, relinquishes and releases the Fund Indemnitors from any and all claims against the Fund Indemnitors for contribution, subrogation or any other recovery of any kind in respect thereof. The Company further agrees that no advancement or payment by the Fund Indemnitors on behalf of any such Fund Director with respect to any claim for which such Fund Director has sought indemnification from the Company shall affect the foregoing and the Fund Indemnitors shall have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of such Fund Director against the Company.

5.9 Right to Conduct Activities. The Company acknowledges that certain of the Investors are in the business of venture capital investing and therefore review the business plans and related proprietary information of many enterprises, including enterprises which may have products or services which compete directly or indirectly with those of the Company. Nothing in this Agreement shall preclude or in any way restrict the Investors from investing or participating in any particular enterprise whether or not such enterprise has products or services which compete with those of the Company. The Company hereby agrees and acknowledges that such Investors (together with their affiliates) invest in numerous portfolio companies, some of which may be deemed competitive with the Company’s business (as currently conducted or as currently propose to be conducted). The Company hereby agrees that, to the extent permitted under applicable law, such Investors shall not be liable to the Company for any claim arising out of, or based upon, (i) the investment by such Investors in any entity competitive with the Company, or (ii) actions taken by any partner, officer or other representative of such Investors to assist any such competitive company, whether or not such action was taken as a member of the board of directors of such competitive company or otherwise, and whether or not such action has a detrimental effect on the Company; provided, however, that the foregoing shall not relieve (x) any of the Investors from liability associated with the unauthorized disclosure of the Company’s confidential information obtained pursuant to this Agreement, or (y) any director or officer of the Company from any liability associated with his or her fiduciary duties to the Company.

5.10 Termination of Covenants. The covenants set forth in this Section 5, except for Subsection 5.7, shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) immediately before a Deemed Liquidation Event, as such term is defined in the Company’s Certificate of Incorporation, whichever event occurs first.

6. Miscellaneous.

6.1 Successors and Assigns. The rights under this Agreement may be assigned (but only with all related obligations) by a Holder to a transferee of Registrable Securities that (i) is an Affiliate of a Holder; (ii) is a Holder's Immediate Family Member or trust for the benefit of an individual Holder or one or more of such Holder's Immediate Family Members; or (iii) after such transfer, holds at least 100,000 shares of Registrable Securities (subject to appropriate adjustment for stock splits, stock dividends, combinations, and other recapitalizations); provided, however, that (x) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee and the Registrable Securities with respect to which such rights are being transferred; and (y) such transferee agrees in a written instrument delivered to the Company to be bound by and subject to the terms and conditions of this Agreement, including the provisions of Subsection 2.11. For the purposes of determining the number of shares of Registrable Securities held by a transferee, the holdings of a transferee (1) that is an Affiliate or stockholder of a Holder; (2) who is a Holder's Immediate Family Member; or (3) that is a trust for the benefit of an individual Holder or such Holder's Immediate Family Member shall be aggregated together and with those of the transferring Holder; provided further that all transferees who would not qualify individually for assignment of rights shall have a single attorney-in-fact for the purpose of exercising any rights, receiving notices, or taking any action under this Agreement. The terms and conditions of this Agreement inure to the benefit of and are binding upon the respective successors and permitted assignees of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assignees any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

6.2 Governing Law. This Agreement and any controversy arising out of or relating to this Agreement shall be governed by and construed in accordance with the internal laws of the Commonwealth of Massachusetts, without regard to conflict of law principles that would result in the application of any law other than the law of the Commonwealth of Massachusetts.

6.3 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, e.g., www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

6.4 Titles and Subtitles. The titles and subtitles used in this Agreement are for convenience only and are not to be considered in construing or interpreting this Agreement.

6.5 Notices. All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given upon the earlier of actual receipt or: (i) personal delivery to the party to be notified; (ii) when sent, if sent by electronic mail or facsimile during the recipient's normal business hours, and if not sent during normal business

hours, then on the recipient's next business day; (iii) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid; or (iv) one (1) business day after the business day of deposit with a nationally recognized overnight courier, freight prepaid, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the respective parties at their addresses as set forth on Schedule A hereto, or to the principal office of the Company at 620 Memorial Drive, Suite 200 West, Cambridge, MA, 02139, ATTN: Chief Executive Officer, in the case of the Company, or to such email address, facsimile number, or address as subsequently modified by written notice given in accordance with this Subsection 6.5. If notice is given to the Company, a copy (which shall not constitute notice) shall also be given to Peter N. Handrinos, Latham & Watkins LLP, 200 Clarendon Street, Boston, Massachusetts 02116, (617) 948-6001 (fax), peter.handrinos@lw.com.

6.6 Amendments and Waivers. Any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance, and either retroactively or prospectively) only with the written consent of the Company and the holders of a majority of the Registrable Securities then outstanding; provided that the Company may in its sole discretion waive compliance with Subsection 2.12(c) (and the Company's failure to object promptly in writing after notification of a proposed assignment allegedly in violation of Subsection 2.12(c) shall be deemed to be a waiver); and provided further that any provision hereof may be waived by any waiving party on such party's own behalf, without the consent of any other party. Notwithstanding the foregoing, this Agreement may not be amended or terminated and the observance of any term hereof may not be waived with respect to any Investor without the written consent of such Investor, unless such amendment, termination, or waiver applies to all Investors in the same fashion (it being agreed that a waiver of the provisions of Section 4 with respect to a particular transaction shall be deemed to apply to all Investors in the same fashion if such waiver does so by its terms, notwithstanding the fact that certain Investors may nonetheless, by agreement with the Company, purchase securities in such transaction). The Company shall give prompt notice of any amendment or termination hereof or waiver hereunder to any party hereto that did not consent in writing to such amendment, termination, or waiver. Any amendment, termination, or waiver effected in accordance with this Subsection 6.6 shall be binding on all parties hereto, regardless of whether any such party has consented thereto. No waivers of or exceptions to any term, condition, or provision of this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such term, condition, or provision.

6.7 Severability. In case any one or more of the provisions contained in this Agreement is for any reason held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement, and such invalid, illegal, or unenforceable provision shall be reformed and construed so that it will be valid, legal, and enforceable to the maximum extent permitted by law.

6.8 Aggregation of Stock. All shares of Registrable Securities held or acquired by Affiliates shall be aggregated together for the purpose of determining the availability of any rights under this Agreement and such Affiliated persons may apportion such rights as among themselves in any manner they deem appropriate.

6.9 Additional Investors. Notwithstanding anything to the contrary contained herein, if the Company issues additional shares of Preferred Stock on or after the date hereof, whether pursuant to the Purchase Agreement or otherwise, any purchaser of such shares of Preferred Stock may become a party to this Agreement by executing and delivering an additional counterpart signature page to this Agreement, and thereafter shall be deemed an “Investor” for all purposes hereunder. No action or consent by the Investors shall be required for such joinder to this Agreement by such additional Investor, so long as such additional Investor has agreed in writing to be bound by all of the obligations as an “Investor” hereunder, and the Company may amend Schedule A to add such additional purchaser as an Investor without requiring the consent of any other party hereto.

6.10 Entire Agreement. This Agreement (including any Schedules and/or Exhibits hereto) constitutes the full and entire understanding and agreement among the parties with respect to the subject matter hereof, and any other written or oral agreement relating to the subject matter hereof existing between the parties is expressly canceled. Upon the effectiveness of this Agreement, the Prior Agreement shall be deemed amended and restated and superseded and replaced in its entirety by this Agreement, and shall be of no further force or effect.

6.11 Dispute Resolution. The parties (a) hereby irrevocably and unconditionally submit to the jurisdiction of the state courts of the Commonwealth of Massachusetts and to the jurisdiction of the United States District Court for the District of Massachusetts for the purpose of any suit, action or other proceeding arising out of or based upon this Agreement, (b) agree not to commence any suit, action or other proceeding arising out of or based upon this Agreement except in the state courts of the Commonwealth of Massachusetts or the United States District Court for the District of Massachusetts, and (c) hereby waive, and agree not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court.

6.12 Waiver of Jury Trial. EACH PARTY HEREBY WAIVES ITS RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS, THE SECURITIES OR THE SUBJECT MATTER HEREOF OR THEREOF. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS TRANSACTION, INCLUDING, WITHOUT LIMITATION, CONTRACT CLAIMS, TORT CLAIMS (INCLUDING NEGLIGENCE), BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. THIS SECTION HAS BEEN FULLY DISCUSSED BY EACH OF THE PARTIES HERETO AND THESE PROVISIONS WILL NOT BE SUBJECT TO ANY EXCEPTIONS. EACH PARTY HERETO HEREBY FURTHER WARRANTS AND REPRESENTS THAT SUCH PARTY HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL, AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

6.13 Delays or Omissions. No delay or omission to exercise any right, power, or remedy accruing to any party under this Agreement, upon any breach or default of any other party under this Agreement, shall impair any such right, power, or remedy of such nonbreaching or nondefaulting party, nor shall it be construed to be a waiver of or acquiescence to any such breach or default, or to any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. All remedies, whether under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

6.14 Further Assurances. At any time or from time to time after the date hereof, the parties agree to cooperate with each other, and at the request of any other party, to execute and deliver any further instruments or documents and to take all such further action as the other party may reasonably request in order to evidence or effectuate the consummation of the transactions contemplated hereby and to otherwise carry out the intent of the parties hereunder.

6.15 Acknowledgment. The Company acknowledges that each Investor is in the business of venture capital investing and therefore reviews the business plans and related proprietary information of many enterprises, including enterprises which may have products or services which compete directly or indirectly with those of the Company. Nothing in this Agreement shall preclude or in any way restrict any Investor from investing or participating in any particular enterprise whether or not such enterprise has products or services which compete with those of the Company.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties have executed this Fourth Amended and Restated Investors’ Rights Agreement as of the date first written above.

EVELO BIOSCIENCES, INC.

By: /s/ Balkrishan (Simba) Gill, Ph.D.
Name: Balkrishan (Simba) Gill, Ph.D.
Title: President and Chief Executive Officer

SIGNATURE PAGE TO FOURTH AMENDED AND RESTATED INVESTORS’ RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Fourth Amended and Restated Investors’ Rights Agreement as of the date first written above.

INVESTORS:

FLAGSHIP VENTURES FUND IV, L.P.
FLAGSHIP VENTURES FUND IV-RX, L.P.

Each by its General Partner,
Flagship Ventures Fund IV General Partner LLC

By: /s/ Noubar B. Afeyan, Ph.D.
Name: Noubar B. Afeyan, Ph.D.
Title: Manager

FLAGSHIP VENTURES FUND V, L.P.
FLAGSHIP V VENTURELABS RX FUND, L.P.
NUTRITIONAL HEALTH DISRUPTIVE INNOVATION FUND, L.P.
NUTRITIONAL HEALTH SIDE FUND, L.P.

Each by its General Partner,
Flagship Ventures Fund V General Partner LLC

By: /s/ Noubar B. Afeyan, Ph.D.
Name: Noubar B. Afeyan, Ph.D.
Title: Manager

FLAGSHIP VENTURES OPPORTUNITIES FUND I, L.P.

By its General Partner,
Flagship Ventures Opportunities Fund I General Partner LLC

By: /s/ Noubar B. Afeyan, Ph.D.
Name: Noubar B. Afeyan, Ph.D.
Title: Member

IN WITNESS WHEREOF, the parties have executed this Fourth Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTORS:

MAYO CLINIC

By: /s/ Harry N. Hoffman

Name: Harry N. Hoffman

Title: Treasurer & Co-Chief Investment Officer

SIGNATURE PAGE TO FOURTH AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Fourth Amended and Restated Investors’ Rights Agreement as of the date first written above.

INVESTORS:

GHF INC.

By: /s/ Theo Melas-Kyriazi
Name: Theo Melas-Kyriazi
Title: Director

SIGNATURE PAGE TO FOURTH AMENDED AND RESTATED INVESTORS’ RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Fourth Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTORS:

CELGENE SWITZERLAND LLC

By: /s/ Kevin Mello

Name: Kevin Mello

Title: Manager

SIGNATURE PAGE TO FOURTH AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Fourth Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTORS:

GV 2016, L.P.

By: GV 2016 GP, L.P., its General Partner
By: GV 2016 GP, L.L.C., its General Partner

By: /s/ Daphne M. Chang
Name: Daphne M. Chang
Title: Authorized Signatory

GV 2017, L.P.

By: GV 2017 GP, L.P., its General Partner
By: GV 2017 GP, L.L.C., its General Partner

By: /s/ Daphne M. Chang
Name: Daphne M. Chang
Title: Authorized Signatory

SIGNATURE PAGE TO FOURTH AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Fourth Amended and Restated Investors’ Rights Agreement as of the date first written above.

INVESTORS:

LEICHESTER FINANCE LIMITED

By: /s/ Harald McPike
Name:
Title:

SIGNATURE PAGE TO FOURTH AMENDED AND RESTATED INVESTORS’ RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Fourth Amended and Restated Investors’ Rights Agreement as of the date first written above.

INVESTORS:

ALEXANDRIA VENTURE INVESTMENTS, LLC,
a Delaware limited liability company

By: ALEXANDRIA REAL ESTATE EQUITIES, INC., a
Maryland corporation, managing member

By: /s/ Aaron Jacobson
Name: Aaron Jacobson
Title: VP – Corporate Counsel

SIGNATURE PAGE TO FOURTH AMENDED AND RESTATED INVESTORS’ RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Fourth Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTORS:

Bhagwant and Krishna Gill, jointly

SIGNATURE PAGE TO FOURTH AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Fourth Amended and Restated Investors’ Rights Agreement as of the date first written above.

INVESTORS:

DEMENTIA DISCOVERY LP

By: Dementia Discovery GP LP, Its Sole General Partner

By: Dementia Discovery General Partner LLP,
Its Sole General Partner

By: /s/ Nick Coleman
Name: Nick Coleman
Title: Member

DDF PARALLEL LLP

By: Dementia Discovery General Partner LLP, Its
Managing Member

By: /s/ Nick Coleman
Name: Nick Coleman
Title: Member

IN WITNESS WHEREOF, the parties have executed this Fourth Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTORS:

SMRS-TOPE LLC

By: HVST-TOPE LLC,
Its Managing Member

By: HarbourVest Partners L.P.
Its Manager

By: HarbourVest Partners, LLC
Its General Partner

By: /s/ Alex A. Rogers

Name: Alex A. Rogers

Title: Managing Director

SIGNATURE PAGE TO FOURTH AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Fourth Amended and Restated Investors’ Rights Agreement as of the date first written above.

INVESTORS:

AFOS, LLC

By: _____
Name:
Title:

SIGNATURE PAGE TO FOURTH AMENDED AND RESTATED INVESTORS’ RIGHTS AGREEMENT

SCHEDULE A

Investors

Flagship Ventures Fund V, L.P.
c/o Flagship Pioneering
55 Cambridge Parkway, 8th Floor
Cambridge, MA 02142
T: XXXXXX
F: XXXXXX
Email: XXXXXX

Alexandria Venture Investments, LLC
385 East Colorado Boulevard, Suite 299
Pasadena, CA 91101
T: XXXXXX
Email: XXXXXXXX

Flagship V VentureLabs Rx Fund, L.P.
c/o Flagship Pioneering
55 Cambridge Parkway, 8th Floor
Cambridge, MA 02142
T: XXXXXX
F: XXXXXX
Email: XXXXXX

Bhagwant and Krishna Gill
P.O. Box 6296
Sharjah, UAE
Email: XXXXXX
XXXXXXXX

Nutritional Health Side Fund, L.P.
c/o Flagship Pioneering
55 Cambridge Parkway, 8th Floor
Cambridge, MA 02142
T: XXXXXX
F: XXXXXX
Email: XXXXXX

Flagship Ventures Opportunities Fund I, L.P.
c/o Flagship Pioneering
55 Cambridge Parkway, 8th Floor
Cambridge, MA 02142
T: XXXXXX
F: XXXXXX
Email: XXXXXX

Flagship Ventures Fund IV, L.P.
c/o Flagship Pioneering
55 Cambridge Parkway, 8th Floor
Cambridge, MA 02142
T: XXXXXX
F: XXXXXX
Email: XXXXXX

Mayo Clinic
200 First Street SW
Rochester, MN 55905
Attn: Treasury Services
Email: XXXXXX

Flagship Ventures Fund IV-Rx, L.P.
c/o Flagship Pioneering
55 Cambridge Parkway, 8th Floor
Cambridge, MA 02142
T: XXXXXX
F: XXXXXX
Email: XXXXXX

GHF Inc.
190 Elgin Avenue
George Town, Grand Cayman KY1-9005
Cayman Islands
Email: XXXXXX
XXXXXX

Nutritional Health Disruptive Innovation Fund, L.P.
c/o Flagship Pioneering
55 Cambridge Parkway, 8th Floor
Cambridge, MA 02142
T: XXXXXX
F: XXXXXX
Email: XXXXXX

With a notice to:

c/o Mr. Theo Melas-Kyriazi
15 Norfolk Road
Chestnut Hill, MA 02467
Email: XXXXXX
XXXXXX

Celgene Switzerland LLC
AON House
30 Woodbourne Ave
Pemborke HM 08
Bermuda
Attention: Kevin Mello
T: XXXXXX
Email: XXXXXX

Leicester Finance Limited
C/O Trident Chambers
PO Box 146
Road Town
Tortola
British Virgin Islands
T: XXXXXX
F: XXXXXX
Email: XXXXXX

Dementia Discovery LP
71 Kingsway
London
WC2B 6ST
UK
Email: XXXXXX
XXXXXX
T: XXXXXX
F: XXXXXX

SMRS-TOPE LLC
c/o HarbourVest Partners, LLC
One Financial Center, 44th Floor
Boston, MA 02111
Attention: Lenny Li
Email: XXXXXX
Fax: XXXXXX

with copy to:

Debevoise & Plimpton LLP
919 Third Avenue
New York, New York 10022
Attention: David J. Schwartz
Email: XXXXXX
Facsimile: XXXXXX

GV 2016, L.P.
Attn: GV Legal Department
1600 Amphitheatre Parkway
Mountain View, CA 94043
Email: XXXXXX

GV 2017, L.P.
Attn: GV Legal Department
1600 Amphitheatre Parkway
Mountain View, CA 94043
Email: XXXXXX

DF Parallel LLP
71 Kingsway
London
WC2B 6ST
UK
Email: XXXXXX
XXXXXX
T: XXXXXX
F: XXXXXX

THIS WARRANT AND THE SECURITIES ISSUABLE UPON ITS EXERCISE HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF. NO SUCH SALE OR DISPOSITION MAY BE EFFECTED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933. THIS WARRANT AND THE SECURITIES ISSUABLE UPON ITS EXERCISE ARE SUBJECT TO THE RESTRICTIONS ON TRANSFER SET FORTH IN SECTION 7 OF THIS WARRANT.

Date of Issuance: 10 June, 2016

Number of Shares:

As set forth in subsection 1.2(c) below

Deemed Original Issue Date: 10 June, 2016

Evelo Biosciences, Inc.

Common Stock Purchase Warrant

Evelo Biosciences, Inc., a Delaware corporation (the “Company”), for value received, hereby certifies that Mayo Foundation for Medical Education and Research, a Minnesota charitable corporation (“Mayo”) (the “Registered Holder”), is entitled, subject to the terms and conditions set forth below, to purchase from the Company, at any time or from time to time on or after the Exercisability Date and on or before 11:59 p.m. (Cambridge, Massachusetts time) on the Expiration Date (as defined below), the number of Warrant Shares determined in accordance with subsection 1.2(g) below at a purchase price of \$0.01 per share (the “Purchase Price”), as may be adjusted from time to time in accordance with the terms of Section 4 hereof.

1. Research Agreement; Definitions.

1.1 This Common Stock Purchase Warrant (this “Warrant”) is issued pursuant to that certain Research and License Agreement, effective as of May 16, 2016, between the Company and Mayo (the “Research Agreement”). Mayo agrees and acknowledges that the issuance of this Warrant to Mayo satisfies and fulfills in their entirety the obligations of the Company pursuant to Section 3.01(b) of the Research Agreement.

1.2 Capitalized terms used herein without definition shall have the meaning provided in the Research Agreement. Unless defined in the Research Agreement or elsewhere in this Warrant, the following terms shall have the following meanings:

(a) “Board” shall mean the Board of Directors of the Company.

(b) “Change of Control” shall mean a “Deemed Liquidation Event” as defined in the Company’s Certificate of Incorporation, as may be amended and/or restated from time to time after the date hereof. Notwithstanding anything herein to the contrary and irrespective of any treatment pursuant to COMPANY’s Certificate of

Incorporation, the contemplated merger between COMPANY and Epiva shall in no event constitute a Change of Control or Deemed Liquidation Event for purposes of this Warrant.

- (c) “Exercisability Date” shall mean the earliest to occur of (x) the date of the closing of the Next Institutional Financing, (y) the consummation of a Change of Control and (z) the third (3rd) anniversary of the Date of Issuance of this Warrant.
- (d) “Next Institutional Financing” shall mean first issuance and sale of shares of convertible preferred stock by the Company after the date hereof: (a) of at least \$10,000,000; and (b) to include, at least in part, institutional investors that are not stockholders or otherwise affiliated with COMPANY. For the sake of clarity, the contemplated merger with Epiva would not constitute Next Institutional Financing.
- (e) “Research Budget” shall mean, for the purpose of determining the Warrant Shares, at the time of any determination of the Research Budget in accordance with the terms hereof, the sum of (x) the agreed upon dollar values of the Research Projects completed through such determination date (as determined in good faith by the Board), not to exceed \$1,000,000 (one million dollars) in the aggregate, plus (y) a 15% premium for the agreed upon dollar values of the Research Projects completed before the Exercisability Date (as determined in good faith by the Board), less (z) a deduction consistent with Section 3.01(b) of the Research Agreement in the amount of an election, if any, by Company to pay cash in lieu of the issuance of shares upon exercise of this warrant for Research Projects completed on or after the Exercisability Date.
 - (i) By way of example and in no way changing the above definition of Research Budget, if the dollar value of a first Research Project completed before the Exercisability Date is \$250,000 and the dollar value of a second Research Project completed before the Exercisability Date is \$600,000, then Research Budget shall mean \$977,500 (based on \$850,000 plus 15% of \$850,000 (or \$127,500)).
 - (ii) By way of a second example and in no way changing the above definition of Research Budget, if (A) the dollar value of a first Research Project completed before the Exercisability Date is \$250,000, (B) the dollar value of a second Research Project completed on or after the Exercisability Date is \$600,000, and (C) Company does not elect in its sole discretion to pay any portion of the \$600,000 in cash in lieu of the issuance of shares upon exercise of this warrant, then Research Budget shall mean \$887,500 (based on \$850,000 plus 15% of \$250,000 (or \$37,500)).
 - (iii) By way of a third example and in no way changing the above definition of Research Budget, if (A) the dollar value of a first Research Project completed before the Exercisability Date is \$250,000, (B) the dollar value of a second Research Project completed on or after the Exercisability Date

is \$600,000, and (C) Company elects in its sole discretion to pay \$300,000 in cash in lieu of the issuance of shares upon exercise of this warrant for such portion of the \$600,000 described in Section 1.2(c)(iii)(B), then Research Budget shall mean \$587,500 (based on \$550,000 plus 15% of \$250,000 (or \$37,500)).

- (f) “Series Preferred” shall mean the convertible preferred stock of the Company that is issued and sold in the Next Institutional Financing.
- (g) “Warrant Shares” shall mean, at the time of any determination of the Warrant Shares in accordance with the terms hereof, such whole number (with any fraction rounded down) of fully paid and nonassessable shares of Common Stock, \$0.001 par value per share, of the Company (“Common Stock”) as is equal to the quotient of (a) the amount of the Research Budget at the time of such determination divided by (b) the per share price at which the Company most recently sold shares of Series Preferred to institutional investors in the Next Institutional Financing, but in no event less than \$7.50 (subject to appropriate adjustment in the event of any stock split, stock dividend, recapitalization or other similar event), or if there not been a Next Institutional Financing at the time of any such determination, such denominator shall be \$7.50 (subject to appropriate adjustment in the event of any stock split, stock dividend, recapitalization or other similar event); provided, however, that the number of Warrant Shares issued or issuable upon exercise or conversion of this Warrant shall at no point exceed, in the aggregate, 153,333 shares of Common Stock (as may be adjusted from time to time in accordance with the terms of Section 4 hereof and which maximum assumes all Research Projects are completed before the Exercisability Date). The amounts set forth in clause (b) of the immediately preceding sentence and the proviso to such sentence shall be subject to appropriate adjustment as determined by the Board in the event that the number of shares of Common Stock issuable upon conversion of a share of Series Preferred is not 1.0. The number of Warrant Shares issuable from time to time under this Warrant shall be determined in good faith by the Board at the first meeting of the Board following the Exercisability Date and, thereafter, following notification from Mayo under the Research Agreement indicating its good faith belief that Mayo has completed a Research Project under the Research Agreement after the Exercisability Date.

2. Termination of Warrant. Notwithstanding anything to the contrary herein, to the extent not previously exercised, converted or terminated, this Warrant and all of the Registered Holder’s rights hereunder shall immediately terminate in their entirety, and thereafter this Warrant shall not be or become exercisable in any respect, upon the earliest to occur of:

- (a) The fifth (5th) anniversary of the Deemed Original Issue Date of this Warrant;
- (b) The termination of the Research Agreement by Mayo (or a successor or assignee of Mayo under such agreement);

- (c) Any material breach of the Research Agreement or the terms of this Warrant by the Registered Holder (including by its officers, directors, employees, members, managers, partners, agents, or representatives);
- (d) The closing of the Initial Public Offering (as defined below);
- (e) The consummation of any Change of Control; and
- (f) The voluntary or involuntary dissolution, liquidation or winding-up of the Company.

The date on which this Warrant expires or terminates pursuant to this Section 2 is referred to herein as the “Expiration Date”.

3. Exercise.

3.1 Exercise for Cash. The Registered Holder may, at its option, elect to exercise the then exercisable portion of this Warrant, in whole or in part and at any time or from time to time, by surrendering this Warrant, with the Notice of Exercise appended hereto as Exhibit I duly executed by or on behalf of the Registered Holder, at the principal office of the Company, or at such other office or agency as the Company may designate, accompanied by (i) payment in full, in lawful money of the United States, of the Purchase Price payable in respect of the number of vested Warrant Shares purchased upon such exercise or (ii) an executed counterpart to all agreements among the Company and its stockholders that the Company reasonably requests the Registered Holder to enter into in connection with such exercise of this Warrant.

3.2 Net Exercise. In lieu of any exercise pursuant to subsection 3.1 hereof, the Registered Holder may elect to convert this Warrant or any portion thereof (the “Conversion Right”), by surrender of this Warrant at the principal office of the Company together with notice of the Registered Holder’s intention to exercise the Conversion Right, into that number of Warrant Shares computed using the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where:

- X = The number of Warrant Shares to be issued to the Holder upon exercise of the Conversion Right.
- Y = The number of Warrant Shares for which this Warrant is being exercised.
- A = The Fair Market Value (as defined below) of one Warrant Share at the time the Conversion Right is exercised.
- B = Purchase Price (as adjusted to the date of such calculation).

For purposes of subsection 3.2, “Fair Market Value” shall mean:

(a) If the Warrant is exercised in connection with and contingent upon the Initial Public Offering, and if the Company’s registration statement relating to such Initial Public Offering has been declared effective by the Securities and Exchange Commission, then the initial “Price to Public” specified in the final prospectus with respect to such offering.

(b) If the Warrant is exercised in connection with and contingent upon a “Deemed Liquidation Event” as defined in the Company’s Certificate of Incorporation, as may be amended and/or restated from time to time after the date hereof, then the purchase price per share of Common Stock, as determined in good faith by the Board of Directors of the Company.

If neither of (a) or (b) is applicable, then the fair market value as determined in good faith by the Board of Directors of the Company.

- 3.3 Exercise Date. Each exercise of this Warrant shall be deemed to have been effected immediately prior to the close of business on the day on which this Warrant shall have been surrendered to the Company as provided in subsection 3.1 above together with the items described in clauses (i) and (ii) thereof or the applicable date of conversion as provided in subsection 3.2 above (any such day, the “Exercise Date”). At such time, the person or persons in whose name or names any certificates for Warrant Shares shall be issuable upon such exercise as provided in subsection 3.4 below shall be deemed to have become the holder or holders of record of the Warrant Shares represented by such certificates.
- 3.4 Issuance of Certificates. Upon receipt by the Company of this Warrant and such Notice of Exercise, together with the aggregate Purchase Price for the Warrant Shares being purchased, at its principal office, or by the stock transfer agent or warrant agent of the Company at its office, the Registered Holder shall be deemed to be the holder of record of the applicable Warrant Shares, notwithstanding that the stock transfer books of the Company shall then be closed or that certificates representing such Warrant Shares shall not then be actually delivered to the Registered Holder. The Company shall, as soon as practicable after the exercise of this Warrant in accordance with the terms hereof, prepare a certificate for the Warrant Shares purchased in the name of the Registered Holder. If this Warrant should be exercised in part only, the Company shall, as soon as practicable after the surrender of this Warrant, execute and deliver a new Warrant evidencing the rights of the Registered Holder thereof to purchase the balance of the Warrant Shares purchasable hereunder.
- 3.5 Automatic Exercise. To the extent this Warrant is not previously exercised, it shall be deemed to have been automatically converted in accordance with subsection 3.2 hereof (even if not surrendered) as of immediately before its expiration, involuntary termination or cancellation if the Fair Market Value of a Warrant Share exceeds the Purchase Price at such time, unless the Registered Holder notifies the Company in writing to the contrary at least three days prior to such automatic exercise.

4. Adjustments.

4.1 Adjustment for Stock Splits and Combinations. If the Company shall at any time or from time to time prior to the Expiration Date effect a subdivision of the outstanding Common Stock, the Purchase Price then in effect immediately before such subdivision shall be proportionately decreased. If the Company shall at any time or from time to time prior to the Expiration Date combine the outstanding shares of Common Stock, the Purchase Price then in effect immediately before such combination shall be proportionately increased. Any adjustment under this paragraph shall become effective at the close of business on the date the applicable subdivision or combination becomes effective.

4.2 Adjustment for Certain Dividends and Distributions. In the event the Company at any time or from time to time prior to the Expiration 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 additional shares of Common Stock, then and in each such event the Purchase Price then 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 Purchase Price then in effect by a fraction:

- (a) 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, as applicable, and
- (b) 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, as applicable;

provided, however, that 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 Purchase Price shall be recomputed accordingly as of the close of business on such record date and thereafter the Purchase Price shall be adjusted pursuant to this subsection 4.2 as of the time of actual payment of such dividends or distributions.

4.3 Adjustment in Number of Warrant Shares. When any adjustment is required to be made in the Purchase Price pursuant to subsections 4.1 or 4.2, the number of Warrant Shares purchasable upon the exercise of this Warrant shall be changed to the number determined by dividing (i) an amount equal to the number of shares issuable upon the exercise of this Warrant immediately prior to such adjustment, multiplied by the Purchase Price in effect immediately prior to such adjustment, by (ii) the Purchase Price in effect immediately after such adjustment.

4.4 Adjustment for Reorganization. If there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Company in which the Common Stock is converted into or exchanged for securities, cash or other property (other than a transaction covered by subsections 4.1 or 4.2) collectively, a "Reorganization"), then,

subject to Section 2, following such Reorganization, the Registered Holder shall receive upon exercise hereof the kind and amount of securities, cash or other property which the Registered Holder would have been entitled to receive pursuant to such Reorganization if such exercise had taken place immediately prior to such Reorganization. In any such case, appropriate adjustment (as determined in good faith by the Board shall be made in the application of the provisions set forth herein with respect to the rights and interests thereafter of the Registered Holder, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Purchase Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities, cash or other property thereafter deliverable upon the exercise of this Warrant.

- 4.5 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Purchase Price pursuant to subsections 4.1, 4.2, 4.3 or 4.4, the Company shall compute such adjustment or readjustment in accordance with the terms hereof and furnish to the Registered Holder a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property for which this Warrant shall be exercisable and the Purchase Price). The Company shall, upon the reasonable written request at any time of the Registered Holder, furnish or cause to be furnished to the Registered Holder a certificate setting forth (i) the Purchase 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 exercise of this Warrant.
5. Fractional Shares. No fractional Warrant Shares will be issued in connection with any exercise hereunder, but in lieu of such fractional shares the Company shall make a cash payment therefor upon the basis of the Purchase Price then in effect.
6. Investment Representations. The initial Registered Holder represents and warrants to the Company as follows:
 - 6.1 Investment. It is acquiring the Warrant, and (if and when it exercises this Warrant) it will acquire the Warrant Shares, for its own account for investment and not with a view to, or for sale in connection with, any distribution thereof, nor with any present intention of distributing or selling the same; and the Registered Holder has no present or contemplated agreement, undertaking, arrangement, obligation, indebtedness or commitment providing for the disposition thereof.
 - 6.2 Accredited Investor and Bad Actor. The Registered Holder is an “accredited investor” as defined in Rule 501(a) under the Securities Act of 1933, as amended (the “Act”). None of the “Bad Actor” disqualifying events described in Rule 506(d)(1)(i) to (viii) promulgated under the Act (a “Disqualification Event”) is applicable to the Registered Holder or, if the Registered Holder is (or, as a result of the exercise of its purchase of Warrant Shares hereunder, will be) described in Rule 506(d) of the Act, any of its Rule 506(d) Related Parties, except, if applicable, for a Disqualification Event as to which Rule 506(d)(2)(ii) or (iii) or (d)(3) is applicable. For purposes of this Warrant, “Rule 506(d) Related Party” shall mean a person that is a beneficial owner of the Registered Holder’s securities for purposes of Rule 506(d) of the Act. Experience. The Registered

Holder has made such inquiry concerning the Company and its business and personnel as it has deemed appropriate, has had an opportunity to discuss the Company and its business with the Company's officers and directors, and has received all information requested or required by the Registered Holder in connection with its investment in the Company and the purchase of this Warrant. The Registered Holder has sufficient knowledge and experience in finance and business that it is capable of evaluating the risks and merits of its investment in the Company.

7. Transfers, etc.

- 7.1 Transfer. In no event shall the Registered Holder sell, assign, transfer, pledge, hypothecate, or otherwise dispose of, by operation of law or otherwise (collectively, "transfer"), in whole or in part, this Warrant, any of the Warrant Shares issued or issuable upon exercise of this Warrant, or any right hereunder, without the prior written consent of the Company; provided, however, that, after the Exercise Date, if (i) the prospective transferee is an "accredited investor" as defined in Rule 501(a) under the Act, (ii) the transfer complies with applicable securities laws and (iii) the transfer would not increase the Company's obligations to its stockholders under applicable securities laws, the consent of the Company shall not be unreasonably withheld for transfers of this Warrant, any of the Warrant Shares issuable upon exercise of the Warrant, or any right hereunder from Mayo to its employees. After the Exercise Date, with the prior written consent of the Company, this Warrant may be transferred upon surrender of this Warrant with a properly executed assignment (in the form of Exhibit II hereto) at the principal office of the Company (or, if another office or agency has been designated by the Company for such purpose, then at such other office or agency).
- 7.2 Restricted Securities. In addition to any restrictions set forth in subsection 7.1 above or elsewhere herein, this Warrant and the Warrant Shares shall not be transferred unless either (i) they first shall have been registered under the Act, or (ii) the Company first shall have been furnished with an opinion of legal counsel satisfactory to the Company to the effect that such sale or transfer is exempt from the registration requirements of the Act. Notwithstanding the foregoing, no registration or opinion of counsel shall be required for a transfer made in accordance with Rule 144 under the Act.
- 7.3 Transferees Bound. Notwithstanding the foregoing or anything to the contrary herein, the Registered Holder agrees that it will not transfer this Warrant or any rights hereunder unless the transferee, as a condition to such transfer, delivers to the Company a written instrument confirming that such transferee shall be bound by all of the terms and conditions hereof; provided that such a written confirmation shall not be required with respect to Section 10 after the completion of the lock-up period in connection with the Initial Public Offering.
- 7.4 No Obligation to Recognize Invalid Transfer. The Company shall not be required (i) to transfer on its books this Warrant or any of the Warrant Shares which shall have been sold or transferred in violation of any of the provisions hereof or of any agreement to which the Registered Holder is bound, or (ii) to treat as owner of this Warrant or such Warrant Shares, or to pay dividends to any transferee to whom any such Warrant Shares shall have been so sold or transferred.

- 7.5 Warrant Register. The Company will maintain a register containing the name and address of the Registered Holder of this Warrant. The Registered Holder may change its address as shown on the warrant register by written notice to the Company requesting such change.
- 7.6 Legends. Each certificate representing Warrant Shares shall bear legends (in addition to, or in combination with, any other legend required by this Warrant or any legend required by applicable federal and state securities laws and agreements relating to the transfer of the Company securities) substantially in the following forms:
- “The securities represented by this certificate have not been registered under the Securities Act of 1933, as amended, and may not be offered, sold or otherwise transferred, pledged or hypothecated unless and until such securities are registered under such Act or an opinion of counsel satisfactory to the Company is obtained to the effect that such registration is not required.”
- “The securities represented by this certificate are subject to certain restrictions on transfer, as provided in a certain Common Stock Purchase Warrant with the Company.”
8. Reservation of Stock. The Company will at all times reserve and keep available, solely for issuance and delivery upon the exercise of this Warrant, such number of Warrant Shares, as from time to time shall be issuable upon the exercise of this Warrant.
9. Exchange or Replacement of Warrants.
- 9.1 Upon the surrender by the Registered Holder, properly endorsed, to the Company at the principal office of the Company, the Company will, subject to the provisions of Section 7 hereof, issue and deliver to or upon the order of the Registered Holder, at the Company’s expense, a new Warrant or Warrants of like tenor, in the name of the Registered Holder or as the Registered Holder (upon payment by the Registered Holder of any applicable transfer taxes) may direct, calling in the aggregate on the face or faces thereof for the number of shares of Warrant Shares.
- 9.2 Upon receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and (in the case of loss, theft or destruction) upon delivery of an indemnity agreement (with surety if reasonably required) in an amount reasonably satisfactory to the Company, or (in the case of mutilation) upon surrender and cancellation of this Warrant, the Company will issue, in lieu thereof, a new Warrant of like tenor.
10. Agreement in Connection with Public Offering. The Registered Holder agrees, in connection with the initial underwritten public offering of the Company’s securities pursuant to a registration statement under the Act (the “Initial Public Offering”), (i) not to

sell, make short sale of, loan, grant any options for the purchase of, or otherwise dispose of any shares of Common Stock held by the Registered Holder (other than any shares included in the offering) without the prior written consent of the Company or the underwriters managing such initial underwritten public offering of the Company's securities for a period of 180 days following the date of the final prospectus relating to the Initial Public Offering (or such other period as may reasonably be requested by the Company or the managing underwriter), and (ii) to execute any agreement reflecting clause (i) above as may be requested by the Company or the managing underwriters at the time of such offering.

11. Notices. All notices and other communications from the Company to the Registered Holder in connection herewith shall be mailed by certified or registered mail, postage prepaid, or sent via a reputable nationwide overnight courier service guaranteeing next business day delivery, to the address set forth on the signature page hereto, or such address as may be provided to the Company in writing by the Registered Holder from time to time pursuant to this Section 11. All notices and other communications from the Registered Holder to the Company in connection herewith shall be mailed by certified or registered mail, postage prepaid, or sent via a reputable nationwide overnight courier service guaranteeing next business day delivery, to the Company at its principal office set forth below. If the Company should at any time change the location of its principal office to a place other than as set forth below, thereafter all references in this Warrant to the location of its principal office at the particular time shall be deemed to refer to the Company's then-current principal office. All such notices and communications shall be deemed delivered (i) two business days after being sent by certified or registered mail, return receipt requested, postage prepaid, or (ii) one business day after being sent via a reputable nationwide overnight courier service guaranteeing next business day delivery.
12. No Rights as Stockholder. No Registered Holder of this Warrant shall be entitled to vote or receive dividends or be deemed the holder of capital stock or any other equity securities of the Company, nor shall anything contained herein be construed to confer upon the Registered Holder of this Warrant, as such, any of the rights of a stockholder of the Company or any right to vote for the election of directors or upon any matter submitted to stockholders at any meeting thereof, or to give or withhold consent to any corporate action (whether upon any recapitalization, issuance of stock, reclassification of stock, change of par value or change of stock to no par value, consolidation, merger, conveyance, or otherwise) or to receive notice of meetings, or to receive dividends or subscription rights or otherwise until this Warrant has been exercised and the Warrant Shares shall have become deliverable, as provided herein.
13. Amendment or Waiver. Any term of this Warrant may be amended or waived only by an instrument in writing signed by the party against which enforcement of the change or waiver is sought. No waivers of any term, condition or provision of this Warrant, in any one or more instances, shall be deemed to be, or construed as, a further or continuing waiver of any such term, condition or provision.

14. Section Headings. The section headings in this Warrant are for the convenience of the parties and in no way alter, modify, amend, limit or restrict the contractual obligations of the parties.
15. Governing Law. This Warrant will be governed by and construed in accordance with the internal laws of the State of Delaware (without reference to the conflicts of law provisions thereof that would result in the application of the laws of any other jurisdiction).
16. Facsimile Signatures. This Warrant may be executed by facsimile or electronic signature transmission (including by pdf).

[- Signature page follows -]

EXECUTED as of the Date of Issuance indicated above.

EVELO BIOSCIENCES, INC.

By: /s/ Simba Gill
Name: Simba Gill
Title: CEO

ATTEST:

MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH

By: /s/ Daniel D. Estes
Name: Daniel D. Estes
Title: Assistant Treasurer

Address:

200 First Street SW
Rochester, MN 55905

NOTICE OF EXERCISE

To:

Dated:

The undersigned, pursuant to the provisions set forth in the attached Warrant, hereby elects to purchase _____ shares of the Common Stock of Evelo Biosciences, Inc. covered by such Warrant.

The undersigned herewith makes payment of the full purchase price for such shares at the price per share provided for in such Warrant. Such payment takes the form of \$ _____ in lawful money of the United States.

By its execution below and for the benefit of the Company, the undersigned hereby restates each of the Investment Representations in Section 6 of the Warrant as of the date hereof.

Signature: _____

Address: _____

NOTICE OF EXERCISE

ASSIGNMENT FORM

FOR VALUE RECEIVED, _____ hereby sells, assigns and transfers all of the rights of the undersigned under the attached Warrant with respect to the number of shares of Common Stock of Evelo Biosciences, Inc. covered thereby set forth below, unto:

<u>Name of Assignee</u>	<u>Address</u>	<u>No. of Shares</u>

Dated: _____ Signature: _____

ASSIGNMENT FORM

THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR ANY APPLICABLE STATE SECURITIES LAWS, AND, EXCEPT PURSUANT TO THE PROVISIONS OF ARTICLE 5 BELOW, MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED WITHOUT AN EFFECTIVE REGISTRATION THEREOF UNDER THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS, OR PURSUANT TO RULE 144 OR AN EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS.

WARRANT TO PURCHASE STOCK

Corporation:	EVELO THERAPEUTICS, INC., a Delaware corporation
Number of Shares:	25,000 (the "Initial Shares"), plus all Additional Shares (as defined in Section 1.6) which Holder is entitled to purchase pursuant to Section 1.6
Class of Stock:	See Section 1.7
Warrant Price:	See Section 1.7
Issue Date:	November 13, 2015
Expiration Date:	November 13, 2025 (Subject to Section 5.1)

THIS WARRANT TO PURCHASE STOCK (THIS "WARRANT") CERTIFIES THAT, for good and valuable consideration, the receipt of which is hereby acknowledged, COMERICA BANK, a Texas banking association, or its permitted assignee ("Holder"), is entitled to purchase up to the number of fully paid and nonassessable shares of the class of securities (the "Shares") of EVELO THERAPEUTICS, INC., a Delaware corporation (the "Company") at the initial exercise price per Share (the "Warrant Price"), all as set forth above and as adjusted from time to time pursuant to the terms of this Warrant, subject to the provisions and upon the terms and conditions set forth in this Warrant. This Warrant is issued in connection with that certain Loan and Security Agreement, dated as of November 13, 2015, by and between COMERICA BANK ("Bank") and the Company, as amended, modified, supplemented or restated from time to time (the "Loan Agreement").

ARTICLE 1 EXERCISE

1.1 Method of Exercise. Holder may exercise this Warrant by a duly executed Notice of Exercise in substantially the form attached as Appendix I to the principal office of the Company (or such other appropriate location as Holder is so instructed by the Company). Holder shall also deliver to the Company a check, wire transfer (to an account designated by the Company) or other form of payment acceptable to the Company for the aggregate Warrant Price for the Shares being purchased.

1.2 [Intentionally Omitted.]

1.3 Delivery of Certificate and New Warrant. Within 30 days after Holder exercises this Warrant and the Company receives payment of the aggregate Warrant Price, the Company shall deliver to Holder certificates for the Shares acquired or, if such Shares are not certificated, the Company shall reflect Holder's ownership of such Shares by book entry in the Company's books and records and, if this Warrant has not been fully exercised and has not expired, the Company shall deliver to Holder, a new warrant representing the Shares not so acquired.

1.4 Replacement of Warrants. In the case of loss, theft or destruction of this Warrant, upon delivery of an indemnity agreement reasonably satisfactory in form and amount to the Company or, in the case of mutilation, upon surrender and cancellation of this Warrant, the Company at its expense shall execute and deliver, in lieu of this Warrant, a new warrant of like tenor.

1.5 Acquisition of the Company.

1.5.1 "Acquisition." For the purpose of this Warrant, "Acquisition" means (a) any sale, lease, exclusive license, or other disposition of all or substantially all of the assets (including intellectual

property) of the Company by means of any transaction or series of related transactions, or (b) any reorganization, consolidation, acquisition, merger, sale of the voting securities of the Company or any other transaction or series of related transactions, in each case where the holders of the Company's outstanding voting securities before the transaction or series of related transactions beneficially own less than 50% of the outstanding voting securities of the surviving entity after the transaction or series of related transactions (other than as the result of a bona fide equity financing exclusively for capital raising purposes in which the Company sells and issues equity securities to venture capital investors (or other investors acceptable to Bank in its sole discretion) and is the surviving and continuing entity in such transaction).

1.5.2 Treatment of Warrant in the Event of an Acquisition. The Company shall give Holder written notice at least 20 days prior to the closing of any proposed Acquisition. The Company will use commercially reasonable efforts to cause (i) the acquirer of the Company, (ii) successor or surviving entity or (iii) parent entity in an Acquisition (the "Acquirer") to assume this Warrant as a part of the Acquisition.

(a) If the Acquirer assumes this Warrant, then this Warrant shall be exercisable for the same securities, cash, and property as would be payable for the Shares issuable upon exercise of the unexercised portion of this Warrant as if such Shares were outstanding on the record date for the Acquisition and subsequent closing of the Acquisition. The Warrant Price shall be adjusted accordingly, and the Warrant Price and number and class of Shares shall continue to be subject to adjustment from time to time in accordance with the provisions hereof.

(b) If the Acquirer does not assume this Warrant in connection with the Acquisition, the Company shall give Holder an additional written notice at least ten (10) days prior to the closing of the Acquisition of such fact (the "Non-Assumption Notice"). In such event, notwithstanding any other provision of this Warrant to the contrary, Holder may immediately exercise this Warrant in the manner specified in this Warrant with such exercise effective immediately prior to closing of the Acquisition. If the Company has provided a Non-Assumption Notice and Holder elects not to exercise this Warrant, then this Warrant will terminate immediately prior to the later of (i) five (5) business days after Holder's receipt of the Non-Assumption Notice, and (ii) the closing of the Acquisition. Notwithstanding any other provision of this Warrant to the contrary if the Acquirer refuses to assume this Warrant in connection with such Acquisition, other than in connection with an Excluded Acquisition (as defined below), then effective automatically as of the date that is ten (10) days prior to the closing of such Acquisition, Holder shall have the option to elect to put this Warrant to the Company for cash in an amount, if any, equal to (x) a per Share amount equal to the difference between the Acquisition consideration payable for one Share and the Warrant Price, times (y) the number of Shares for which this Warrant is then exercisable; provided, that if no cash amount results from the foregoing calculation, then this Warrant will automatically expire immediately prior to the consummation of such Acquisition. Holder's exercise of the put right may be conditioned on the closing of the Acquisition. As used herein, an "Excluded Acquisition" means, an Acquisition where the consideration that the holders of the Shares are entitled to receive on account of the Shares consists entirely of cash and/or shares of common stock that are publicly traded and listed on a national exchange and where the shares, if any, receivable by Holder of this Warrant were Holder to exercise this Warrant in full immediately prior to the closing of such Acquisition may be publicly re-sold by Holder in their entirety within the three (3) months following such closing pursuant to Rule 144 or an effective registration statement under the Act.

1.6 Number of Shares. This Warrant shall be exercisable for the Initial Shares, plus, the Additional Shares, as defined below (collectively, the "Shares"), each as may be adjusted from time to time in accordance with the provisions of Section 2 of this Warrant. As used herein, "Additional Shares" means a number of Shares equal to one and one half percent (1.50%) *multiplied* by the aggregate principal amount of Growth Capital Advances made by Bank to Borrower in excess of One Million Dollars (\$1,000,000) under and as defined in that certain Loan and Security Agreement between the Company and Bank dated as of the date hereof (the "Loan Agreement") *divided* by the Warrant Price (as set forth in Section 1.7 below).

1.7 Class of Stock and Warrant Price. The Initial Shares shall be exercisable for the Company's Series A Preferred Stock at a price per share equal to Sixty Cents (\$0.60) (the "Series A Price"). Any Additional Shares earned prior to the date on which the Company consummates the issuance and sale of shares of its Series A-2 Preferred Stock (the "A-2 Closing") shall also be exercisable for the Company's Series A Preferred Stock at the Series A Price. From and after the A-2 Closing, any Additional Shares earned shall be exercisable for the Company's Series A-2 Preferred Stock at a price per share equal to One Dollar and Twenty Cents (\$1.20) (the "Warrant Price"; provided that prior to the A-2 Closing, the "Warrant Price" means the Series A Price.

ARTICLE 2 ADJUSTMENTS TO THE SHARES

2.1 Stock Dividends, Etc. If the Company declares or pays a dividend on the Shares payable in additional Shares or other securities, then upon exercise of this Warrant, for each Share acquired, Holder shall receive, without cost to Holder, the total number and kind of securities to which Holder would have been entitled had Holder owned the Shares of record as of the date the dividend occurred; provided, that any such dividend shall only be paid on Additional Shares if the dividend is paid at such time as such Additional Shares have been earned and the Warrant is exercisable at the time of the dividend for such Additional Shares.

2.2 Reclassification, Exchange or Substitution. Upon any reclassification, exchange, substitution, or other event that results in a change of the number and/or class of the securities issuable upon exercise or conversion of this Warrant, Holder shall be entitled to receive, upon exercise or conversion of this Warrant, the number and kind of securities and property that Holder would have received for the Shares if this Warrant had been exercised immediately before such reclassification, exchange, substitution, or other event. Such an event shall include any automatic conversion of the outstanding or issuable securities of the Company of the same class or series as the Shares to common stock pursuant to the terms of the Company's Certificate of Incorporation upon the closing of a registered public offering of the Company's common stock. The Company or its successor shall promptly issue to Holder a new warrant for such new securities or other property. The new warrant shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Article 2 including, without limitation, adjustments to the Warrant Price, the number of securities or property issuable upon exercise of the new warrant and expiration date. The provisions of this Section 2.2 shall similarly apply to successive reclassifications, exchanges, substitutions, or other events.

2.3 Adjustments for Combinations, Etc. If the outstanding Shares are combined or consolidated, by reclassification, reverse split or otherwise, into a lesser number of Shares, the Warrant Price shall be proportionately increased and the Number of Shares issuable under this Warrant shall be proportionately decreased. If the outstanding Shares are subdivided, split or multiplied, by reclassification, a stock dividend resulting in the issuance of additional Shares or otherwise, into a greater number of Shares, the Warrant Price shall be proportionately decreased and the Number of Shares issuable under this Warrant shall be proportionately increased.

2.4 Adjustments for Diluting Issuances. In the event of the issuance by the Company, after the Issue Date of this Warrant, of securities at a price per share less than the Warrant Price that would trigger an anti-dilution adjustment with respect to the Shares in accordance with the Company's Certificate of Incorporation and that is not otherwise waived in accordance with the Company's Certificate of Incorporation (a "Diluting Issuance"), then the number of shares of common stock issuable upon conversion of the Shares issuable upon exercise of this Warrant shall be adjusted, if applicable, in accordance with those provisions of the Company's Certificate of Incorporation, a copy of which is attached hereto as Exhibit A, which apply to Diluting Issuances as if the Shares issuable upon exercise of this Warrant were outstanding on the date of such Diluting Issuance. The provisions set forth for the Shares in the Company's Certificate of Incorporation relating to the above in effect as of the Issue Date may not be amended, modified or waived, without the prior written consent of Holder unless such amendment, modification or waiver affects the rights associated with the Shares in the same manner as such amendment, modification or waiver affects the rights associated with all other shares of the same series and class as the Shares granted to Holder. Under no circumstances shall the aggregate Warrant Price payable by Holder upon exercise of this Warrant increase as a result of any adjustment arising from a Diluting Issuance. For the avoidance of doubt, there shall be no duplicate antidilution adjustment pursuant to this Section 2.4 and the Company's Certificate of Incorporation.

2.5 No Impairment. The Company shall not, by amendment of its Certificate of Incorporation or through a reorganization, transfer of assets, consolidation, merger, dissolution, issue, or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed under this Warrant by the Company, but shall at all times in good faith assist in carrying out all the provisions of this Article 2 and in taking all such action as may be necessary or appropriate to protect Holder's rights under this Article 2 against impairment.

2.6 Certificate as to Adjustments. Upon each adjustment of the Warrant Price and/or the Number of Shares, the Company at its expense shall promptly compute such adjustment, and furnish Holder with a certificate signed by its Chief Financial Officer setting forth such adjustment and the facts upon which such adjustment is based. The Company shall, upon written request, furnish Holder a certificate setting forth the Warrant Price and Number of Shares in effect upon the date thereof and the series of adjustments leading to such Warrant Price and Number of Shares.

2.7 Fractional Shares. No fractional Shares shall be issuable upon exercise of this Warrant and the Number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional share interest arises upon any exercise of this Warrant, the Company shall eliminate such fractional share interest by paying Holder, at Holder's request, an amount computed by multiplying the fractional interest by the fair market value, as determined by the Company's Board of Directors, of a full Share.

ARTICLE 3

REPRESENTATIONS AND COVENANTS OF THE COMPANY

3.1 Representations and Warranties. The Company hereby represents and warrants to, and agrees with, Holder as follows as of the Issue Date:

3.1.1 The initial Series A Price referenced in Section 1.7 of this Warrant is not greater than the lowest price per share at which the Company has sold Series A Shares as of the Issue Date.

3.1.2 All Shares which may be issued upon the exercise of the purchase right represented by this Warrant in accordance with this Warrant, and all securities, if any, issuable upon conversion of such Shares in accordance with the Company's Certificate of Incorporation, shall, upon issuance, be duly authorized, validly issued, fully paid and nonassessable, and free of any liens and encumbrances except for restrictions on transfer provided for herein or under applicable federal and state securities laws.

3.1.3 The Company's capitalization table delivered to Holder as of the Issue Date is true and complete as of the Issue Date.

3.2 Notice of Certain Events. If the Company proposes at any time (a) to declare any dividend or distribution upon its stock, whether in cash, property, stock, or other securities and whether or not a regular cash dividend; (b) to offer for subscription pro rata to the holders of any class or series of its stock any additional shares of stock of any class or series or other rights (other than pursuant to contractual preemptive or other participation rights held by certain of the Company's stockholders); (c) to effect any reclassification or recapitalization of stock; or (d) to merge or consolidate with or into any other corporation (other than mergers or consolidations (i) of a subsidiary of the Company into the Company, or (ii) following which the holders of the Company's outstanding voting securities before such merger or consolidation beneficially own at least 50% of the outstanding voting securities of the Company after such merger or consolidation), or sell, lease, exclusively license, or convey all or substantially all of its assets, or to liquidate, dissolve or wind up, then, in connection with each such event, the Company shall give Holder (1) at least 10 days prior written notice of the date on which a record will be taken for such dividend, distribution, or subscription rights (and specifying the date on which the holders of stock will be entitled thereto) or for determining rights to vote, if any, in respect of the matters referred to in (a) and (b) above; and (2) in the case of the matters referred to in (c) and (d) above at least 10 days prior written notice of the date when the same will take place (and specifying the date on which the holders of stock will be entitled to exchange their stock for securities or other property deliverable upon the occurrence of such event). Upon request, the Company shall provide Holder with such information reasonably necessary for Holder to evaluate its rights as a holder of this Warrant or Shares in the case of matters referred to (a), (b), (c) and (d) herein above.

3.3 Information Rights. So long as Holder holds this Warrant and/or any of the Shares, the Company shall deliver to Holder, upon Holder's reasonable request (a) promptly after mailing, copies of all communications, information and/or communiqués to the stockholders of the Company, (b) within one hundred eighty (180) days after the end of each fiscal year of the Company, the annual audited financial statements of the Company certified by independent public accountants of recognized standing and (c) upon demand by Holder, within forty-five (45) days after the end of the first three quarters of each fiscal year, the Company's quarterly, unaudited financial statements; provided, however, the Company shall not be required to provide the foregoing so long as it has similar reporting obligations under a loan and security agreement with Comerica Bank or following its initial public offering of equity securities pursuant to an effective registration statement under the Act. In addition, and without limiting the generality of the foregoing, upon demand and prior to an initial public offering of the Company's common stock and provided Holder holds this warrant and/or any of the Shares, the Company shall deliver to the Holder the financial information required to be delivered to Major Investors (as defined in that certain Investors Rights Agreement between the Company and its investor(s) dated as of June 29, 2015 (the "Agreement") a copy of which is attached hereto as Exhibit B), under Section 3.1(a) to (e) of the Agreement.

3.4 Registration Under the Act. The Company agrees that the Shares or, if the Shares are convertible into common stock of the Company, solely such common stock, shall be deemed "Registrable Securities" or otherwise entitled to "piggy back" registration rights for registrations initiated by either the Company or a stockholder in accordance with the terms of the Agreement. The Company agrees that no amendments will be made to the Agreement which would have an adverse impact on Holder's registration rights hereunder, solely to the extent such adverse impact is disproportionate to the adverse impact of such amendment on all other holders of Registrable Securities (as defined in the Agreement), taken as a whole. By execution of this Warrant, Holder (and any permitted assignee) shall be deemed to be a party to the Agreement solely for the purpose of the above-mentioned registration rights and, notwithstanding anything to the contrary herein, for the purpose of Section 2.11 ("Market Stand off" Agreement) of the Agreement.

ARTICLE 4

INVESTMENT REPRESENTATIONS AND COVENANTS

With respect to the acquisition of this Warrant and any of the Shares issuable upon exercise of this Warrant, Holder hereby represents and warrants to, and agrees with, the Company as follows:

4.1 Purchase Entirely for Own Account. This Warrant is issued to Holder in reliance upon Holder's representation to the Company that this Warrant and the Shares issuable upon exercise of this Warrant (and the shares of common stock issuable upon conversion of such Shares) will be acquired for investment for Holder's, or its affiliates', own account, not as a nominee or agent, and not with a view to the resale or distribution of any part thereof other than to an affiliate, and that Holder has no present intention of selling, granting any participation in, or otherwise distributing the same other than to an affiliate. By executing this Warrant, Holder further represents that Holder does not have any contract, undertaking, agreement or arrangement with any person, other than an affiliate, to sell, transfer or grant participations to such person or to any third person with respect to this Warrant, the Shares issuable upon exercise of this Warrant or any shares of common stock issuable upon conversion of such Shares.

4.2 Reliance upon Holder's Representations. Holder understands that this Warrant and the Shares issuable upon exercise of this Warrant are not registered under the Act on the ground that the issuance of such securities is exempt from registration under the Act, and that the Company's reliance on such exemption is predicated on Holder's representations set forth herein.

4.3 Accredited Investor Status. Holder represents to the Company that Holder is an Accredited Investor (as defined in the Act).

4.4 Restricted Securities. Holder understands that this Warrant and the Shares issuable upon exercise of this Warrant are "restricted securities" under the federal securities laws inasmuch as they are being acquired from the Company in a transaction not involving a public offering and that under such federal securities laws and applicable regulations such securities may be resold without registration under the Act only in certain limited circumstances and absent such a circumstance Holder may be required to hold this Warrant and the Shares to be issued upon any exercise hereof indefinitely. Holder is aware of the provisions of Rule 144 promulgated under the Act.

4.5 Disclosure of Information. Holder is aware of the Company's business affairs and financial condition and has received or has had full access to all the information it considers necessary or appropriate to make an informed investment decision with respect to the acquisition of this Warrant and the Shares to be issued upon any exercise hereof. Holder further has had an opportunity to ask questions and receive answers from the Company regarding the terms and conditions of the offering of this Warrant and the Shares to be issued upon any exercise hereof and to obtain additional information (to the extent the Company possessed such information or could acquire it without unreasonable effort or expense) necessary to verify any information furnished to Holder or to which Holder has access.

4.6 Investment Experience. Holder understands that the purchase of this Warrant and its underlying securities involves substantial risk. Holder has experience as an investor in securities of companies in the development stage and acknowledges that Holder can bear the economic risk of such Holder's investment in this Warrant and its underlying securities and has such knowledge and experience in financial or business matters that Holder is capable of evaluating the merits and risks of its investment in this Warrant and its underlying securities and/or has a preexisting personal or business relationship with the Company and certain of its officers, directors or controlling persons of a nature and duration that enables Holder to be aware of the character, business acumen and financial circumstances of such persons.

4.7 No Voting Rights. Holder, as a Holder of this Warrant, will not have any voting rights until the exercise of this Warrant.

ARTICLE 5 MISCELLANEOUS

5.1 Term; Exercise Upon Expiration. This Warrant is exercisable in whole or in part, at any time and from time to time on or before the Expiration Date set forth above; *provided, however*, that if the Company completes its initial public offering within the one-year period immediately prior to the Expiration Date, the Expiration Date shall automatically be extended until the earlier of: (a) the first anniversary of the effective date of the Company's initial public offering, and (b) November 13, 2026. The Company agrees that Holder may terminate this Warrant, upon notice to the Company, at any time in its sole discretion.

5.2 Legends. This Warrant and the Shares issuable upon exercise of this Warrant (and the securities issuable, directly or indirectly, upon conversion of such Shares, if any) shall be imprinted with a legend in substantially the following form:

THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR ANY APPLICABLE STATE SECURITIES LAWS, AND, EXCEPT PURSUANT TO THE PROVISIONS OF ARTICLE 5 BELOW, MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED WITHOUT AN EFFECTIVE REGISTRATION THEREOF UNDER THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS, OR PURSUANT TO RULE 144 OR AN EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS.

5.3 Compliance with Securities Laws on Transfer. This Warrant and the Shares issuable upon exercise of this Warrant (and the securities issuable, directly or indirectly, upon conversion of such Shares, if any) may not be transferred or assigned in whole or in part without compliance with applicable federal and state securities laws by the transferor and the transferee. The Company shall not require Bank or a Bank Affiliate (as defined herein) to provide an opinion of counsel or investment representation letter if the transfer is to Bank's parent company, Comerica Incorporated ("Comerica"), or any other affiliate of Bank ("Bank Affiliate").

5.4 Transfer Procedure. After receipt of the executed Warrant, Bank will transfer all of this Warrant to Comerica Ventures Incorporated, a non-banking subsidiary of Comerica and a Bank Affiliate (“Ventures”) and, in connection with such transfer, Ventures shall be deemed to have restated each of the representations and warranties in Section 4 of this Warrant with respect to itself as of the date thereof. Subject to the provisions of Section 5.3 and Section 2.11 of the Agreement, Holder may transfer all or part of this Warrant or the Shares issuable upon exercise of this Warrant (or the securities issuable, directly or indirectly, upon conversion of such Shares, if any) by giving the Company notice of the portion of this Warrant being transferred setting forth the name, address and taxpayer identification number of the transferee and surrendering this Warrant to the Company for reissuance to the transferee(s) (and Holder, if applicable); provided, however, that Holder may transfer all or part of this Warrant to its affiliates, including, without limitation, Ventures, at any time without notice or the delivery of any other instrument to the Company, and such affiliate shall then be entitled to all the rights and subject to the obligations of Holder under this Warrant and any related agreements, and the Company shall cooperate fully in ensuring that any stock issued upon exercise of this Warrant is issued in the name of the affiliate that exercises this Warrant. The terms and conditions of this Warrant shall inure to the benefit of, and be binding upon, the Company and Holders hereof and their respective permitted successors and assigns.

5.5 Notices. All notices and other communications from the Company to Holder, or vice versa, shall be deemed delivered and effective when given personally or mailed by first-class registered or certified mail, postage prepaid, or sent via a nationally recognized overnight courier service, fee prepaid, or on the first business day after transmission by facsimile, at such address or facsimile number as may have been furnished to the Company or Holder, as the case may be, in writing by the Company or such Holder from time to time. Effective upon the receipt of executed Warrant and initial transfer described in Section 5.4 above, all notices to Holder shall be addressed as follows until the Company receives notice of a change of address in connection with a transfer or otherwise:

Comerica Ventures Incorporated
Attn: Warrant Administrator
1717 Main Street, 5th Floor, MC 6406
Dallas, Texas 75201
Facsimile No.: XXXXX

All notices to the Company shall be addressed as follows, with a copy (which shall not constitute notice) to Latham & Watkins LLP, John Hancock Tower, 200 Clarendon Street, Boston, MA 02116, Attention: Peter N. Handrinos:

EVELO THERAPEUTICS, INC.
790 Memorial Drive
Cambridge, MA 02139
Facsimile No.: ()

5.6 Amendments; Waiver. This Warrant and any term hereof may be amended, changed, waived, discharged or terminated only by an instrument in writing signed by the party against which enforcement of such amendment, change, waiver, discharge or termination is sought.

5.7 Attorneys’ Fees. In the event of any dispute between the parties concerning the terms and provisions of this Warrant, the party prevailing in such dispute shall be entitled to collect from the other party all costs incurred in such dispute, including reasonable attorneys’ fees.

5.8 Governing Law. This Warrant shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to its principles regarding conflicts of law that would result in the application of the laws of any other jurisdiction.

5.9 Confidentiality. The Company hereby agrees to keep the terms and conditions of this Warrant confidential provided that the Company may provide copies of this Warrant in connection with third party due diligence in equity financing and acquisition transactions provided that the recipient thereof agrees to keep the terms hereof confidential. Notwithstanding the foregoing confidentiality obligation, the Company may disclose

information relating to this Warrant in a registration statement filed with the Securities and Exchange Commission or as required by law, rule, regulation, court order or other legal authority, provided that (i) the Company has given Holder at least ten (10) days' notice of such required disclosure, and (ii) the Company only discloses information that is required, (as determined in good faith by the Company and its counsel) to be disclosed.

5.10 Counterparts. This Warrant may be executed in counterparts, all of which taken together shall constitute one and the same instrument.

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IN WITNESS WHEREOF, each of the parties have caused this Warrant to be duly executed by its duly authorized officers as of the first date written above.

EVELO THERAPEUTICS, INC.

By: /s/ Balkrishan Gill
Name: Balkrishan Gill
Title: Chief Executive Officer and President

COMERICA BANK

By: /s/ Jason Pan
Name: Jason Pan
Title: Vice President

[Signature Page to Warrant to Purchase Stock]

NOTICE OF EXERCISE

1. The undersigned hereby elects to purchase _____ shares of the [Series A Preferred Stock/Series A-2 Preferred Stock] stock of **EVELO THERAPEUTICS, INC.** pursuant to the terms of the attached Warrant, and tenders herewith payment of the purchase price of such shares in full.

2. Please issue a certificate or certificates representing said shares in the name of the undersigned or in such other name as is specified below:

Comerica Ventures Incorporated
Attn: Warrant Administrator
1717 Main Street, 5th Floor, MC 6406
Dallas, Texas 75201
Facsimile No. XXXXX

3. The undersigned represents it is acquiring the shares solely for its own account and not as a nominee for any other party and not with a view toward the resale or distribution thereof except in compliance with applicable securities laws, and confirms the representations and warranties set forth in Article 4 of the attached Warrant.

COMERICA VENTURES INCORPORATED or Assignee

(Signature)

(Name and Title)

(Date)

Exhibit A

Anti-Dilution Provisions

Second Amended and Restated Certificate of Incorporation (including all amendments thereto) – ATTACHED HERETO

Exhibit A

Page 1

Exhibit B

Investors' Rights Agreement (including all amendments thereto) – ATTACHED HERETO

Exhibit B
Page 1

THIS AMENDED AND RESTATED WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH APPLICABLE LAW.

AMENDED AND RESTATED WARRANT TO PURCHASE STOCK

Corporation:	EVELO BIOSCIENCES, INC.
Number of Shares:	62,497.5
Class of Stock:	Series A-1 Preferred
Initial Exercise Price:	\$0.60024 per share
Issue Date:	August 15, 2016
Expiration Date:	January 28, 2026

THIS AMENDED AND RESTATED WARRANT CERTIFIES THAT, for good and valuable consideration, the receipt of which is hereby acknowledged, **PACIFIC WESTERN BANK** or its permitted assignee or transferee ("**Holder**") is entitled to purchase the number of fully paid and nonassessable shares of the class of securities (the "**Shares**") of **EVELO BIOSCIENCES, INC.** (the "**Company**") at the initial exercise price per Share (the "**Warrant Price**") all as set forth above and as adjusted pursuant to Article 2 of this warrant, subject to the provisions and upon the terms and conditions set forth in this warrant. This Warrant amends and restates, and is issued in replacement of, the Warrant to Purchase Stock issued by **EPIVA BIOSCIENCES, INC.** ("**Epiva**") to the Holder on January 28, 2016 originally exercisable for 75,000 shares of Series A Preferred Stock of Epiva, which warrant is cancelled, and of no further force or effect.

ARTICLE 1

EXERCISE

1.1 Method of Exercise. Holder may exercise this warrant by delivering this warrant and a duly executed Notice of Exercise in substantially the form attached as Appendix 1 to the principal office of the Company. Unless Holder is exercising the conversion right set forth in Section 1.2, Holder shall also deliver to the Company a check for the aggregate Warrant Price for the Shares being purchased.

1.2 Conversion Right. In lieu of exercising this warrant as specified in Section 1.1, Holder may from time to time convert this warrant, in whole or in part, into a number of Shares determined by dividing (a) the aggregate fair market value of the Shares or other securities otherwise issuable upon exercise of this warrant minus the aggregate Warrant Price of such Shares by (b) the fair market value of one Share. The fair market value of the Shares shall be determined pursuant to Section 1.3. In connection with each such conversion, or other exercise of this Warrant pursuant to Section 1.1, Holder shall be deemed to have restated each of the representations and warranties in Section 3.5 of this warrant as of the date thereof.

1.3 Fair Market Value. If the Shares are traded regularly in a public market, the fair market value of the Shares shall be the closing price of the Shares (or the closing price of the Company's stock into which the Shares are convertible) reported for the business day

immediately before Holder delivers its Notice of Exercise to the Company. If the Shares are not regularly traded in a public market, the Board of Directors of the Company shall determine fair market value in its reasonable good faith judgment.

1.4 Delivery of Certificate and New Warrant. Promptly after Holder exercises or converts this warrant, the Company shall deliver to Holder certificates for the Shares acquired and, if this warrant has not been fully exercised or converted and has not expired, a new warrant representing the Shares not so acquired.

1.5 Replacement of Warrants. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement reasonably satisfactory in form and amount to the Company or, in the case of mutilation, on surrender and cancellation of this warrant, the Company at its expense shall execute and deliver, in lieu of this warrant, a new warrant of like tenor.

1.6 Repurchase on Sale, Merger, or Consolidation of the Company.

1.6.1 “Acquisition.” For the purpose of this warrant, “Acquisition” means (a) any sale, exclusive license, or other disposition of all or substantially all of the assets (including intellectual property) of the Company, or (b) any reorganization, consolidation, merger or sale of the voting securities of the Company (other than a merger or consolidation effective exclusively to change the Company’s domicile) or other transaction, in each case, where the holders of the Company’s securities before the transaction beneficially own less than 50% of the outstanding voting securities of the surviving entity after the transaction.

1.6.2 Exercise Upon Acquisition. Upon the closing of any Acquisition in which the consideration to be received by the Company’s stockholders consists of cash, marketable securities, or a combination of both cash and marketable securities, this warrant shall be deemed to have been automatically converted pursuant to Section 1.2 immediately prior to such Acquisition, and thereafter Holder shall participate in the Acquisition on the same terms as other holders of the same class of securities of the Company, provided, however, that if the fair market value of the Shares, as determined pursuant to Section 1.3, in connection with such Acquisition is less than the aggregate Warrant Price, then this warrant shall terminate without exercise or conversion immediately prior, and subject, to the closing of such Acquisition.

1.6.3 Assumption of Warrant. Upon the closing of any Acquisition not referred to in Section 1.6.2, the successor entity shall assume the obligations of this warrant, and this warrant shall thereafter be exercisable for the same securities and/or other property as would have been paid for the Shares issuable upon exercise of the unexercised portion of this warrant as if such Shares were outstanding on and as of the closing of such Acquisition, subject to further adjustment from time to time in accordance with the provisions of this warrant.

ARTICLE 2

ADJUSTMENTS TO THE SHARES

2.1 Stock Dividends, Splits, Etc. If the Company declares or pays a dividend on its common stock payable in common stock, or other securities, or subdivides the outstanding common stock into a greater amount of common stock, then upon exercise of this warrant, for each Share acquired, Holder shall receive, without cost to Holder, the total number and kind of securities to which Holder would have been entitled had Holder owned the Shares of record as of the date the dividend or subdivision occurred.

2.2 Reclassification, Exchange or Substitution. Upon any reclassification, exchange, substitution, or other event that results in a change of the number and/or class of the securities issuable upon exercise or conversion of this warrant, Holder shall be entitled to receive, upon exercise or conversion of this warrant, the number and kind of securities and property that Holder would have received for the Shares if this warrant had been exercised immediately before such reclassification, exchange, substitution, or other event. Such an event shall include any automatic conversion of the outstanding or issuable securities of the Company of the same class or series as the Shares to common stock pursuant to the terms of the Company's Amended and Restated Certificate of Incorporation upon the closing of a registered public offering of the Company's common stock. The Company or its successor shall promptly issue to Holder a new warrant for such new securities or other property. The new warrant shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Article 2 including, without limitation, adjustments to the Warrant Price and to the number of securities or property issuable upon exercise of the new warrant. The provisions of this Section 2.2 shall similarly apply to successive reclassifications, exchanges, substitutions, or other events.

2.3 Adjustments for Combinations, Etc. If the outstanding Shares are combined or consolidated, by reclassification or otherwise, into a lesser number of shares, the Warrant Price shall be proportionately increased. If the outstanding Shares are combined or consolidated, by reclassification or otherwise, into a greater number of shares, the Warrant Price shall be proportionately decreased.

2.4 Adjustments for Diluting Issuances. Without duplication of any adjustment otherwise provided for in this Section 2, the number of shares of common stock issuable upon conversion of the Shares shall be subject to anti-dilution adjustment from time to time in accordance with the manner set forth in the Company's Certificate of Incorporation as if the Shares were issued and outstanding on and as of the date of any such required adjustment.

2.5 Certificate as to Adjustments. Upon each adjustment of the Warrant Price, the Company at its expense shall promptly compute such adjustment, and furnish Holder with a certificate of its Chief Financial Officer setting forth such adjustment and the facts upon which such adjustment is based. The Company shall, upon written request, furnish Holder a certificate setting forth the Warrant Price in effect upon the date thereof and the series of adjustments leading to such Warrant Price.

2.6 Fractional Shares. No fractional Shares shall be issuable upon exercise or conversion of the Warrant and the Number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional share interest arises upon any exercise or conversion of the Warrant, the Company shall eliminate such fractional share interest by paying Holder an amount computed by multiplying the fractional interest by the fair market value of a full Share.

ARTICLE 3

REPRESENTATIONS AND COVENANTS OF THE COMPANY AND OF THE HOLDER

3.1 Representations and Warranties of the Company. The Company hereby represents and warrants to the Holder as follows:

(a) The initial Warrant Price referenced on the first page of this warrant is the price per share paid by investors in the Company's most recent preferred stock financing.

(b) All Shares which may be issued upon the exercise of the purchase right represented by this Warrant in accordance with this Warrant, and all securities, if any, issuable upon conversion of the Shares in accordance with the Company's Amended and Restated Certificate of Incorporation, shall, upon issuance, be duly authorized, validly issued, fully paid and nonassessable, and free of any liens and encumbrances except for restrictions on transfer provided for herein or under applicable federal and state securities laws.

(c) The Company's capitalization table attached to this warrant is true and complete as of the Issue Date.

3.2 Notice of Certain Events. The Company shall provide Holder with not less than 7 days prior written notice of, including a description of the material facts surrounding, any of the following events: (a) declaration of any dividend or distribution upon its common stock, whether in cash, property, stock, or other securities and whether or not a regular cash dividend; (b) offering for subscription pro rata to the holders of any class or series of its stock any additional shares of stock of any class or series or other rights; (c) effecting any reclassification or recapitalization of common stock; or (d) the merger or consolidation with or into any other corporation, or sale, lease, license, or conveyance of all or substantially all of its assets, or liquidation, dissolution or winding up.

3.3 Information Rights. Prior to an initial public offering of the Company's common stock and provided Holder holds this warrant and/or any of the Shares, the Company shall deliver to the Holder the financial information required to be delivered to Major Investors (as defined in the IRA) under Section 3.1(a) and 3.1(b) pursuant to that certain Investors Rights Agreement dated as of June 16, 2016 by and among the Company and the investors named therein (the "IRA").

3.4 Registration Under Securities Act of 1933, as amended. The Company agrees that the Shares or, if the Shares are convertible into common stock of the Company, such common stock, shall be "Registrable Securities", and Holder shall be a "Holder" under the IRA.

3.5 Holder Investment Representations. Holder makes the representations to the Company set forth in Exhibit A hereof in connection with the issuance of this warrant and the Shares (collectively, the "Securities").

3.6 Market Stand Off. Holder agrees that it shall be subject to the Market Standoff provisions in Section 2.11 of the IRA.

3.7 Company Agreements. If upon exercise of this warrant (other than in connection with an Acquisition or an initial public offering of the Company's common stock) Holder continues to hold the Shares, upon the request of the Company, Holder shall execute a counterpart signature page to the investor and stockholder agreements governing the rights and obligations in respect to the Company's Series A-1 Preferred Stock.

ARTICLE 4

MISCELLANEOUS

4.1 Term: Exercise Upon Expiration. This warrant is exercisable in whole or in part, at any time and from time to time on or before the Expiration Date set forth above. If this warrant has not been exercised prior to the Expiration Date, this warrant shall be deemed to have been automatically exercised on the Expiration Date by "cashless" conversion pursuant to Section 1.2.

4.2 Legends. This warrant and the Shares (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) shall be imprinted with a legend in substantially the following form:

THIS SECURITY HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH APPLICABLE LAW.

4.3 Compliance with Securities Laws on Transfer. This warrant and the Shares issuable upon exercise of this warrant (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) may not be transferred or assigned in whole or in part without compliance with applicable federal and state securities laws by the transferor and the transferee. The Company shall not require Holder to provide an opinion of counsel if the transfer is to an affiliate of Holder or if there is no material question as to the availability of current information as referenced in Rule 144(c), Holder represents that it has complied with Rule 144 (d) and (e) in reasonable detail, the selling broker represents that it has complied with Rule 144(f), and the Company is provided with a copy of Holder's notice of proposed sale.

4.4 Transfer Procedure. Subject to the provisions of Section 4.3, Holder may transfer all or part of this warrant or the Shares issuable upon exercise of this warrant (or the securities issuable, directly or indirectly, upon conversion of the Shares, if any) by giving the Company notice of the portion of the warrant being transferred setting forth the name, address and taxpayer identification number of the transferee and surrendering this warrant to the Company for reissuance to the transferee(s) (and Holder, if applicable). No surrender or reissuance shall be required for a transfer to an affiliate of Holder.

4.5 Notices. All notices and other communications from the Company to the Holder, or vice versa, shall be deemed delivered and effective when given personally or mailed by first -class registered or certified mail, postage prepaid, at such address as may have been furnished to

the Company or the Holder, as the case may be, in writing by the Company or such Holder from time to time. All notices to the Holder shall be addressed as follows:

Pacific Western Bank
Attn: Warrant Administrator
406 Blackwell Street, Suite 240
Durham, NC 27701

All notices to the Company shall be addressed as follows:

EVELO BIOSCIENCES, INC.
620 Memorial Drive, Suite 208
Cambridge, MA 02139
Attn: Chief Executive Officer
FAX:

4.6 Amendments. This warrant and any term hereof may be changed, waived, discharged or terminated only by an instrument in writing signed by the party against which enforcement of such change, waiver, discharge or termination is sought.

4.7 Attorneys' Fees. In the event of any dispute between the parties concerning the terms and provisions of this warrant, the party prevailing in such dispute shall be entitled to collect from the other party all costs incurred in such dispute, including reasonable attorneys' fees.

4.8 Governing Law. This warrant shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to its principles regarding conflicts of law that would result in the application of the laws of any other jurisdiction.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned has executed this Amended and Restated Warrant to Purchase Stock as of the date set forth above.

EVELO BIOSCIENCES, INC.

BY: /s/ Jennifer Glennon
Name: Jennifer Glennon
Name: Assistant Secretary

Acknowledged and agreed:

PACIFIC WESTERN BANK

By: _____
Name: _____
Title: _____

[Signature Page to Warrant to Purchase Stock]

IN WITNESS WHEREOF, the undersigned has executed this Amended and Restated Warrant to Purchase Stock as of the date set forth above.

EVELO BIOSCIENCES, INC.

By: _____
Name: _____
Title: _____

Acknowledged and agreed:

PACIFIC WESTERN BANK

By: /s/ John Orlando _____
Name: John Orlando
Title: Vice President

[Signature Page to Warrant to Purchase Stock]

APPENDIX 1

NOTICE OF EXERCISE

1. The undersigned hereby elects to _____ purchase shares of the _____ stock of **EVELO BIOSCIENCES, INC.** pursuant to the terms of the attached warrant, and tenders herewith payment of the purchase price of such shares in full.

1. The undersigned hereby elects to convert the attached warrant into shares in the manner specified in the warrant. This conversion is exercised with respect to _____ of the shares covered by the warrant.

[Strike paragraph that does not apply.]

2. Please issue a certificate or certificates representing said shares in the name of the undersigned or in such other name as is specified below:

(Holder's Name)

(Address)

3. The undersigned represents it is acquiring the shares solely for its own account and not as a nominee for any other party and not with a view toward the resale or distribution thereof except in compliance with applicable securities laws.

PACIFIC WESTERN BANK or Registered Assignee

(Signature)

(Date)

EXHIBIT A

INVESTMENT REPRESENTATIONS

- (a) Holder is aware of the Company's business affairs and financial condition, and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. Holder is purchasing the Securities for its own account for investment purposes only, not as a nominee or agent, and not with a view towards, or for resale in connection with, any "distribution" thereof for purposes of the Securities Act of 1933, as amended (the "Securities Act"). Holder has such knowledge and experience in financial business matters and Holder is capable of evaluating the merits and risks of the purchase of the Securities and of protecting its interests in connection therewith.
- (b) Holder understands that the Securities have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Holder's investment intent as expressed herein.
- (c) Holder further understands that the Securities must be held indefinitely, and Holder must therefore bear the economic risk therewith, unless the Securities are subsequently registered under the Securities Act or unless an exemption from registration is otherwise available. In addition, Holder understands that the certificate evidencing the Securities will be imprinted with a legend which prohibits the transfer of the Securities unless they are registered or such registration is not required.
- (d) Holder is familiar with the provisions of Rule 144, promulgated pursuant to the Securities Act, which, in substance, permits limited public resale of "restricted securities" acquired, directly or indirectly, from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions.
- (e) The Securities may be resold *in* certain limited circumstances subject to the provisions of Rule 144, which requires, among other things, the existence of a public market for the Securities, the availability of certain current public information about the Company, the resale occurring not less than one year after a party has purchased and paid for the security to be sold, the sales being effected through a "broker's transaction" or in transactions directly with a "market maker" and the number of securities being sold during any three-month period not exceeding specified limitations.
- (f) Holder further understands that *in* the event that all of the applicable requirements of Rule 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required.
- (g) Holder is an "accredited investor" as defined in Rule 501(a) of Regulation D promulgated under the Securities Act.

THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH APPLICABLE LAW.

WARRANT TO PURCHASE STOCK

Corporation:	EVELO BIOSCIENCES, INC.
Number of Shares:	See Section 1.7
Class of Stock:	Series A-3 Preferred Stock
Initial Exercise Price:	\$1.20 per share
Issue Date:	August 15, 2016
Expiration Date:	August 15, 2026

THIS WARRANT CERTIFIES THAT, for good and valuable consideration, the receipt of which is hereby acknowledged, **PACIFIC WESTERN BANK** or its permitted assignee (“**Holder**”) is entitled to purchase the number of fully paid and nonassessable shares of the class of securities (the “**Shares**”) of **EVELO BIOSCIENCES, INC.** (the “**Company**”) at the initial exercise price per Share (the “**Warrant Price**”) all as set forth above and as adjusted pursuant to Article 2 of this warrant, subject to the provisions and upon the terms and conditions set forth in this warrant.

ARTICLE 1

EXERCISE

1.1 Method of Exercise. Holder may exercise this warrant by delivering this warrant and a duly executed Notice of Exercise in substantially the form attached as Appendix 1 to the principal office of the Company. Unless Holder is exercising the conversion right set forth in Section 1.2, Holder shall also deliver to the Company a check for the aggregate Warrant Price for the Shares being purchased.

1.2 Conversion Right. In lieu of exercising this warrant as specified in Section 1.1, Holder may from time to time convert this warrant, in whole or in part, into a number of Shares determined by dividing (a) the aggregate fair market value of the Shares or other securities otherwise issuable upon exercise of this warrant minus the aggregate Warrant Price of such Shares by (b) the fair market value of one Share. The fair market value of the Shares shall be determined pursuant to Section 1.3. In connection with each such conversion, or other exercise of this Warrant pursuant to Section 1.1, Holder shall be deemed to have restated each of the representations and warranties in Section 3.5 of this Warrant as of the date thereof.

1.3 Fair Market Value. If the Shares are traded regularly in a public market, the fair market value of the Shares shall be the closing price of the Shares (or the closing price of the Company’s stock into which the Shares are convertible) reported for the business day immediately before Holder delivers its Notice of Exercise to the Company. If the Shares are not regularly traded in a public market, the Board of Directors of the Company shall determine fair market value in its reasonable good faith judgment.

1.4 Delivery of Certificate and New Warrant. Promptly after Holder exercises or converts this warrant, the Company shall deliver to Holder certificates for the Shares acquired and, if this warrant has not been fully exercised or converted and has not expired, a new warrant representing the Shares not so acquired.

1.5 Replacement of Warrants. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement reasonably satisfactory in form and amount to the Company or, in the case of mutilation, on surrender and cancellation of this warrant, the Company at its expense shall execute and deliver, in lieu of this warrant, a new warrant of like tenor.

1.6 Treatment of Warrant Upon Acquisition of the Company.

1.6.1 “Acquisition.” For the purpose of this warrant, “Acquisition” means (a) any sale, exclusive license, or other disposition of all or substantially all of the assets (including intellectual property) of the Company, or (b) any reorganization, consolidation, merger or sale of the voting securities of the Company (other than a merger or consolidation effective exclusively to change the Company’s domicile) or other transaction, in each case, where the holders of the Company’s securities before the transaction beneficially own less than 50% of the outstanding voting securities of the surviving entity after the transaction.

1.6.2 Exercise Upon Acquisition. Upon the closing of any Acquisition in which the consideration to be received by the Company’s stockholders consists of cash, marketable securities, or a combination of both cash and marketable securities, this warrant shall be deemed to have been automatically converted pursuant to Section 1.2 immediately prior to such Acquisition, and thereafter Holder shall participate in the Acquisition on the same terms as other holders of the same class of securities of the Company, provided, however, that if the fair market value of the Shares, as determined pursuant to Section 1.3, in connection with such Acquisition is less than the aggregate Warrant Price, then this warrant shall terminate without exercise or conversion immediately prior, and subject, to the closing of such Acquisition.

1.6.3 Assumption of Warrant. Upon the closing of any Acquisition not referred to in Section 1.6.2, the successor entity shall assume the obligations of this warrant, and this warrant shall thereafter be exercisable for the same securities and/or other property as would have been paid for the Shares issuable upon exercise of the unexercised portion of this warrant as if such Shares were outstanding on and as of the closing of such Acquisition, subject to further adjustment from time to time in accordance with the provisions of this warrant.

1.7 Number of Shares. The Number of Shares for which this Warrant shall be exercisable shall be equal to the lesser of (I) (a) one and one quarter of one percent (1.25%) of the principal amount of all Tranche A Term Loans (as defined in that certain Loan and Security Agreement by and among the Company and Pacific Western Bank dated as of the date hereof) made by Pacific Western Bank to the Company in excess of \$7,000,000 (which amount shall not exceed \$3,000,000) divided by (b) the Warrant Price (subject to adjustment as set forth in Section 2) or (II) 31,248 shares.

ARTICLE 2

ADJUSTMENTS TO THE SHARES

2.1 Stock Dividends, Splits, Etc. If the Company declares or pays a dividend on its common stock payable in common stock, or other securities, or subdivides the outstanding common stock into a greater amount of common stock, then upon exercise of this warrant, for each Share acquired, Holder shall receive, without cost to Holder, the total number and kind of securities to which Holder would have been entitled had Holder owned the Shares of record as of the date the dividend or subdivision occurred.

2.2 Reclassification, Exchange or Substitution. Upon any reclassification, exchange, substitution, or other event that results in a change of the number and/or class of the securities issuable upon exercise or conversion of this warrant, Holder shall be entitled to receive, upon exercise or conversion of this warrant, the number and kind of securities and property that Holder would have received for the Shares if this warrant had been exercised immediately before such reclassification, exchange, substitution, or other event. Such an event shall include any automatic conversion of the outstanding or issuable securities of the Company of the same class or series as the Shares to common stock pursuant to the terms of the Company's Amended and Restated Certificate of Incorporation upon the closing of a registered public offering of the Company's common stock. The Company or its successor shall promptly issue to Holder a new warrant for such new securities or other property. The new warrant shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Article 2 including, without limitation, adjustments to the Warrant Price and to the number of securities or property issuable upon exercise of the new warrant. The provisions of this Section 2.2 shall similarly apply to successive reclassifications, exchanges, substitutions, or other events.

2.3 Adjustments for Combinations, Etc. If the outstanding Shares are combined or consolidated, by reclassification or otherwise, into a lesser number of shares, the Warrant Price shall be proportionately increased. If the outstanding Shares are combined or consolidated, by reclassification or otherwise, into a greater number of shares, the Warrant Price shall be proportionately decreased.

2.4 Adjustments for Diluting Issuances. In the event of the issuance (a "*Diluting Issuance*") by the Company after the Issue Date of securities at a price per share less than the Warrant Price, then the number of shares of common stock issuable upon conversion of the Shares shall be adjusted in accordance with those provisions of the Company's Articles (Certificate) of Incorporation that apply to Diluting Issuances.

2.5 Certificate as to Adjustments. Upon each adjustment of the Warrant Price, the Company at its expense shall promptly compute such adjustment, and furnish Holder with a certificate of its Chief Financial Officer setting forth such adjustment and the facts upon which such adjustment is based. The Company shall, upon written request, furnish Holder a certificate setting forth the Warrant Price in effect upon the date thereof and the series of adjustments leading to such Warrant Price.

2.6 Fractional Shares. No fractional Shares shall be issuable upon exercise or conversion of the Warrant and the Number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional share interest arises upon any exercise or conversion of the Warrant, the Company shall eliminate such fractional share interest by paying Holder the amount computed by multiplying the fractional interest by the fair market value of a full Share.

ARTICLE 3

REPRESENTATIONS AND COVENANTS OF THE COMPANY AND OF THE HOLDER

3.1 Representations and Warranties of the Company. The Company hereby represents and warrants to the Holder as follows:

(a) The initial Warrant Price referenced on the first page of this warrant is not greater than the fair market value of the Shares as of the date of this warrant.

(b) All Shares which may be issued upon the exercise of the purchase right represented by this Warrant in accordance with this Warrant, and all securities, if any, issuable upon conversion of the Shares in accordance with the Company's Amended and Restated Certificate of Incorporation, shall, upon issuance, be duly authorized, validly issued, fully paid and nonassessable, and free of any liens and encumbrances except for restrictions on transfer provided for herein or under applicable federal and state securities laws.

(c) The Company's capitalization table attached to this warrant is true and complete as of the Issue Date.

3.2 Notice of Certain Events. The Company shall provide Holder with not less than 10 days prior written notice of, including a description of the material facts surrounding, any of the following events: (a) declaration of any dividend or distribution upon its common stock, whether in cash, property, stock, or other securities and whether or not a regular cash dividend; (b) offering for subscription pro rata to the holders of any class or series of its stock any additional shares of stock of any class or series or other rights; (c) effecting any reclassification or recapitalization of common stock; or (d) the merger or consolidation with or into any other corporation, or sale, lease, license, or conveyance of all or substantially all of its assets, or liquidation, dissolution or winding up.

3.3 Information Rights. Prior to an initial public offering of the Company's common stock and provided Holder holds this warrant and/or any of the Shares, the Company shall deliver to the Holder the financial information required to be delivered to Major Investors (as defined in the IRA) under Section 3.1(a) and 3.1(b) pursuant to that certain Investors Rights Agreement dated as of June 16, 2016 by and among the Company and the investors named therein (the "**IRA**").

3.4 Registration Under Securities Act of 1933, as amended. The Company agrees that the Shares or, if the Shares are convertible into common stock of the Company, such common stock, shall be "Registrable Securities", and Holder shall be a "Holder" under the IRA.

3.5 Holder Investment Representations. Holder makes the representations to the Company set forth in Exhibit A hereof in connection with the issuance of this warrant and the Shares (collectively, the “Securities”).

3.6 Market Stand Off. Holder agrees that it shall be subject to the Market Standoff provisions in Section 2.11 of the IRA.

3.7 Company Agreements. If upon exercise of this warrant (other than in connection with an Acquisition or an initial public offering of the Company’s common stock) Holder continues to hold the Shares, upon the request of the Company, Holder shall execute a counterpart signature page to the investor and stockholder agreements governing the rights and obligations in respect to the Company’s Series A-3 Preferred Stock.

ARTICLE 4

MISCELLANEOUS

4.1 Term: Exercise Upon Expiration. This warrant is exercisable in whole or in part, at any time and from time to time on or before the Expiration Date set forth above. If this warrant has not been exercised prior to the Expiration Date, this warrant shall be deemed to have been automatically exercised on the Expiration Date by “cashless” conversion pursuant to Section 1.2.

4.2 Legends. This warrant and the Shares (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) shall be imprinted with a legend in substantially the following form:

THIS SECURITY HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH APPLICABLE LAW.

4.3 Compliance with Securities Laws on Transfer. This warrant and the Shares issuable upon exercise of this warrant (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) may not be transferred or assigned in whole or in part without compliance with applicable federal and state securities laws by the transferor and the transferee. The Company shall not require Holder to provide an opinion of counsel if the transfer is to an affiliate of Holder or if there is no material question as to the availability of current information as referenced in Rule 144(c), Holder represents that it has complied with Rule 144 (d) and (e) in reasonable detail, the selling broker represents that it has complied with Rule 144(f), and the Company is provided with a copy of Holder’s notice of proposed sale.

4.4 Transfer Procedure. Subject to the provisions of Section 4.3, Holder may transfer all or part of this warrant or the Shares issuable upon exercise of this warrant (or the securities issuable, directly or indirectly, upon conversion of the Shares, if any) by giving the Company notice of the portion of the warrant being transferred setting forth the name, address and taxpayer identification number of the transferee and surrendering this warrant to the Company for reissuance to the transferee(s) (and Holder, if applicable). No surrender or reissuance shall be required for a transfer to an affiliate of Holder.

4.5 Notices. All notices and other communications from the Company to the Holder, or vice versa, shall be deemed delivered and effective when given personally or mailed by first-class registered or certified mail, postage prepaid, at such address as may have been furnished to the Company or the Holder, as the case may be, in writing by the Company or such Holder from time to time. All notices to the Holder shall be addressed as follows:

Pacific Western Bank
Attn: Warrant Administrator
406 Blackwell Street, Suite 240
Durham, NC 27701

All notices to the Company shall be addressed as follows:

EVELO BIOSCIENCES, INC.
620 Memorial Drive, Suite 208
Cambridge, MA 02139
Attn: Chief Executive Officer
FAX:

4.6 Amendments. This warrant and any term hereof may be changed, waived, discharged or terminated only by an instrument in writing signed by the party against which enforcement of such change, waiver, discharge or termination is sought.

4.7 Attorneys' Fees. In the event of any dispute between the parties concerning the terms and provisions of this warrant, the party prevailing in such dispute shall be entitled to collect from the other party all costs incurred in such dispute, including reasonable attorneys' fees.

4.8 Governing Law. This warrant shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to its principles regarding conflicts of law that would result in the application of the laws of any other jurisdiction.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned has executed this Warrant to Purchase Stock as of the date set forth above.

EVELO BIOSCIENCES, INC.

By: /s/ Jennifer Glennon
Name: Jennifer Glennon
Title: Assistant Secretary

Acknowledged and agreed:

PACIFIC WESTERN BANK

By: /s/ John Orlando
Name: John Orlando
Title: Vice President

APPENDIX 1

NOTICE OF EXERCISE

1. The undersigned hereby elects to purchase _____ shares of the _____ stock of **EVELO BIOSCIENCES, INC.** pursuant to the terms of the attached warrant, and tenders herewith payment of the purchase price of such shares in full.

1. The undersigned hereby elects to convert the attached warrant into shares in the manner specified in the warrant. This conversion is exercised with respect to _____ of the shares covered by the warrant.

[Strike paragraph that does not apply.]

2. Please issue a certificate or certificates representing said shares in the name of the undersigned or in such other name as is specified below:

(Holder's Name)

(Address)

3. The undersigned represents it is acquiring the shares solely for its own account and not as a nominee for any other party and not with a view toward the resale or distribution thereof except in compliance with applicable securities laws.

PACIFIC WESTERN BANK or Registered Assignee

(Signature)

(Date)

EXHIBIT A

INVESTMENT REPRESENTATIONS

- (a) Holder is aware of the Company's business affairs and financial condition, and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. Holder is purchasing the Securities for its own account for investment purposes only, not as a nominee or agent, and not with a view towards, or for resale in connection with, any "distribution" thereof for purposes of the Securities Act of 1933, as amended (the "Securities Act"). Holder has such knowledge and experience in financial business matters and Holder is capable of evaluating the merits and risks of the purchase of the Securities and of protecting its interests in connection therewith.
- (b) Holder understands that the Securities have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Holder's investment intent as expressed herein.
- (c) Holder further understands that the Securities must be held indefinitely, and Holder must therefore bear the economic risk therewith, unless the Securities are subsequently registered under the Securities Act or unless an exemption from registration is otherwise available. In addition, Holder understands that the certificate evidencing the Securities will be imprinted with a legend which prohibits the transfer of the Securities unless they are registered or such registration is not required.
- (d) Holder is familiar with the provisions of Rule 144, promulgated pursuant to the Securities Act, which, in substance, permits limited public resale of "restricted securities" acquired, directly or indirectly, from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions.
- (e) The Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which requires, among other things, the existence of a public market for the Securities, the availability of certain current public information about the Company, the resale occurring not less than one year after a party has purchased and paid for the security to be sold, the sales being effected through a "broker's transaction" or in transactions directly with a "market maker" and the number of securities being sold during any three-month period not exceeding specified limitations.
- (f) Holder further understands that in the event that all of the applicable requirements of Rule 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required.
- (g) Holder is an "accredited investor" as defined in Rule 501(a) of Regulation D promulgated under the Securities Act.

THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH APPLICABLE LAW.

SECOND WARRANT TO PURCHASE STOCK

Corporation:	EVELO BIOSCIENCES, INC.
Number of Shares:	34,722
Class of Stock:	Series B Preferred Stock
Initial Exercise Price:	\$1.80 per share
Issue Date:	February 7, 2018
Expiration Date:	February 7, 2028

THIS WARRANT CERTIFIES THAT, for good and valuable consideration, the receipt of which is hereby acknowledged, **PACIFIC WESTERN BANK** or its permitted assignee (“**Holder**”) is entitled to purchase the number of fully paid and nonassessable shares of the class of securities (the “**Shares**”) of **EVELO BIOSCIENCES, INC.** (the “**Company**”) at the initial exercise price per Share (the “**Warrant Price**”) all as set forth above and as adjusted pursuant to Article 2 of this warrant, subject to the provisions and upon the terms and conditions set forth in this warrant.

ARTICLE 1

EXERCISE

1.1 Method of Exercise. Holder may exercise this warrant by delivering this warrant and a duly executed Notice of Exercise in substantially the form attached as Appendix 1 to the principal office of the Company. Unless Holder is exercising the conversion right set forth in Section 1.2, Holder shall also deliver to the Company a check for the aggregate Warrant Price for the Shares being purchased.

1.2 Conversion Right. In lieu of exercising this warrant as specified in Section 1.1, Holder may from time to time convert this warrant, in whole or in part, into a number of Shares determined by dividing (a) the aggregate fair market value of the Shares or other securities otherwise issuable upon exercise of this warrant minus the aggregate Warrant Price of such Shares by (b) the fair market value of one Share. The fair market value of the Shares shall be determined pursuant to Section 1.3. In connection with each such conversion, or other exercise of this Warrant pursuant to Section 1.1, Holder shall be deemed to have restated each of the representations and warranties in Section 3.5 of this Warrant as of the date thereof.

1.3 Fair Market Value. If the Shares are traded regularly in a public market, the fair market value of the Shares shall be the closing price of the Shares (or the closing price of the Company’s stock into which the Shares are convertible) reported for the business day immediately before Holder delivers its Notice of Exercise to the Company. If the Shares are not regularly traded in a public market, the Board of Directors of the Company shall determine fair market value in its reasonable good faith judgment.

1.4 Delivery of Certificate and New Warrant. Promptly after Holder exercises or converts this warrant, the Company shall deliver to Holder certificates for the Shares acquired and, if this warrant has not been fully exercised or converted and has not expired, a new warrant representing the Shares not so acquired.

1.5 Replacement of Warrants. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement reasonably satisfactory in form and amount to the Company or, in the case of mutilation, on surrender and cancellation of this warrant, the Company at its expense shall execute and deliver, in lieu of this warrant, a new warrant of like tenor.

1.6 Treatment of Warrant Upon Acquisition of the Company.

1.6.1 “Acquisition.” For the purpose of this warrant, “Acquisition” means (a) any sale, exclusive license, or other disposition of all or substantially all of the assets (including intellectual property) of the Company, or (b) any reorganization, consolidation, merger or sale of the voting securities of the Company (other than a merger or consolidation effective exclusively to change the Company’s domicile) or other transaction, in each case, where the holders of the Company’s securities before the transaction beneficially own less than 50% of the outstanding voting securities of the surviving entity after the transaction.

1.6.2 Exercise Upon Acquisition. Upon the closing of any Acquisition in which the consideration to be received by the Company’s stockholders consists of cash, marketable securities, or a combination of both cash and marketable securities, this warrant shall be deemed to have been automatically converted pursuant to Section 1.2 immediately prior to such Acquisition, and thereafter Holder shall participate in the Acquisition on the same terms as other holders of the same class of securities of the Company, provided, however, that if the fair market value of the Shares, as determined pursuant to Section 1.3, in connection with such Acquisition is less than the aggregate Warrant Price, then this warrant shall terminate without exercise or conversion immediately prior, and subject, to the closing of such Acquisition.

1.6.3 Assumption of Warrant. Upon the closing of any Acquisition not referred to in Section 1.6.2, the successor entity shall assume the obligations of this warrant, and this warrant shall thereafter be exercisable for the same securities and/or other property as would have been paid for the Shares issuable upon exercise of the unexercised portion of this warrant as if such Shares were outstanding on and as of the closing of such Acquisition, subject to further adjustment from time to time in accordance with the provisions of this warrant.

ARTICLE 2

ADJUSTMENTS TO THE SHARES

2.1 Stock Dividends, Splits, Etc. If the Company declares or pays a dividend on its common stock payable in common stock, or other securities, or subdivides the outstanding common stock into a greater amount of common stock, then upon exercise of this warrant, for each Share acquired, Holder shall receive, without cost to Holder, the total number and kind of securities to which Holder would have been entitled had Holder owned the Shares of record as of the date the dividend or subdivision occurred.

2.2 Reclassification, Exchange or Substitution. Upon any reclassification, exchange, substitution, or other event that results in a change of the number and/or class of the securities issuable upon exercise or conversion of this warrant, Holder shall be entitled to receive, upon exercise or conversion of this warrant, the number and kind of securities and property that Holder would have received for the Shares if this warrant had been exercised immediately before such reclassification, exchange, substitution, or other event. Such an event shall include any automatic conversion of the outstanding or issuable securities of the Company of the same class or series as the Shares to common stock pursuant to the terms of the Company's Amended and Restated Certificate of Incorporation upon the closing of a registered public offering of the Company's common stock. The Company or its successor shall promptly issue to Holder a new warrant for such new securities or other property. The new warrant shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Article 2 including, without limitation, adjustments to the Warrant Price and to the number of securities or property issuable upon exercise of the new warrant. The provisions of this Section 2.2 shall similarly apply to successive reclassifications, exchanges, substitutions, or other events.

2.3 Adjustments for Combinations, Etc. If the outstanding Shares are combined or consolidated, by reclassification or otherwise, into a lesser number of shares, the Warrant Price shall be proportionately increased. If the outstanding Shares are combined or consolidated, by reclassification or otherwise, into a greater number of shares, the Warrant Price shall be proportionately decreased.

2.4 Adjustments for Diluting Issuances. In the event of the issuance (a "*Diluting Issuance*") by the Company after the Issue Date of securities at a price per share less than the Warrant Price, then the number of shares of common stock issuable upon conversion of the Shares shall be adjusted in accordance with those provisions of the Company's Articles (Certificate) of Incorporation that apply to Diluting Issuances.

2.5 Certificate as to Adjustments. Upon each adjustment of the Warrant Price, the Company at its expense shall promptly compute such adjustment, and furnish Holder with a certificate of its Chief Financial Officer setting forth such adjustment and the facts upon which such adjustment is based. The Company shall, upon written request, furnish Holder a certificate setting forth the Warrant Price in effect upon the date thereof and the series of adjustments leading to such Warrant Price.

2.6 Fractional Shares. No fractional Shares shall be issuable upon exercise or conversion of the Warrant and the Number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional share interest arises upon any exercise or conversion of the Warrant, the Company shall eliminate such fractional share interest by paying Holder the amount computed by multiplying the fractional interest by the fair market value of a full Share.

ARTICLE 3

REPRESENTATIONS AND COVENANTS OF THE COMPANY AND OF THE HOLDER

3.1 Representations and Warranties of the Company. The Company hereby represents and warrants to the Holder as follows:

(a) The initial Warrant Price referenced on the first page of this warrant is not greater than the fair market value of the Shares as of the date of this warrant.

(b) All Shares which may be issued upon the exercise of the purchase right represented by this Warrant in accordance with this Warrant, and all securities, if any, issuable upon conversion of the Shares in accordance with the Company's Amended and Restated Certificate of Incorporation, shall, upon issuance, be duly authorized, validly issued, fully paid and nonassessable, and free of any liens and encumbrances except for restrictions on transfer provided for herein or under applicable federal and state securities laws.

(c) The Company's capitalization table attached to this warrant is true and complete as of the Issue Date.

3.2 Notice of Certain Events. The Company shall provide Holder with not less than 10 days prior written notice of, including a description of the material facts surrounding, any of the following events: (a) declaration of any dividend or distribution upon its common stock, whether in cash, property, stock, or other securities and whether or not a regular cash dividend; (b) offering for subscription pro rata to the holders of any class or series of its stock any additional shares of stock of any class or series or other rights; (c) effecting any reclassification or recapitalization of common stock; or (d) the merger or consolidation with or into any other corporation, or sale, lease, license, or conveyance of all or substantially all of its assets, or liquidation, dissolution or winding up.

3.3 Information Rights. Prior to an initial public offering of the Company's common stock and provided Holder holds this warrant and/or any of the Shares, the Company shall deliver to the Holder the financial information required to be delivered to Major Investors (as defined in the IRA) under Sections 3.1(a) and 3.1(b) pursuant to that certain Third Amended and Restated Investors Rights Agreement dated as of January 5, 2017 by and among the Company and the investors named therein (the "**IRA**").

3.4 Registration Under Securities Act of 1933, as amended. The Company agrees that the Shares or, if the Shares are convertible into common stock of the Company, such common stock, shall be "Registrable Securities", and Holder shall be a "Holder" under the IRA.

3.5 Holder Investment Representations. Holder makes the representations to the Company set forth in Exhibit A hereof in connection with the issuance of this warrant and the Shares (collectively, the "Securities").

3.6 Market Stand Off. Holder agrees that it shall be subject to the Market Standoff provisions in Section 2.11 of the IRA.

3.7 Company Agreements. If upon exercise of this warrant (other than in connection with an Acquisition or an initial public offering of the Company's common stock) Holder continues to hold the Shares, upon the request of the Company, Holder shall execute a counterpart signature page to the investor and stockholder agreements governing the rights and obligations in respect to the Company's Series B Preferred Stock.

ARTICLE 4

MISCELLANEOUS

4.1 Term: Exercise Upon Expiration. This warrant is exercisable in whole or in part, at any time and from time to time on or before the Expiration Date set forth above. If this warrant has not been exercised prior to the Expiration Date, this warrant shall be deemed to have been automatically exercised on the Expiration Date by "cashless" conversion pursuant to Section 1.2.

4.2 Legends. This warrant and the Shares (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) shall be imprinted with a legend in substantially the following form:

THIS SECURITY HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH APPLICABLE LAW.

4.3 Compliance with Securities Laws on Transfer. This warrant and the Shares issuable upon exercise of this warrant (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) may not be transferred or assigned in whole or in part without compliance with applicable federal and state securities laws by the transferor and the transferee. The Company shall not require Holder to provide an opinion of counsel if the transfer is to an affiliate of Holder or if there is no material question as to the availability of current information as referenced in Rule 144(c), Holder represents that it has complied with Rule 144 (d) and (e) in reasonable detail, the selling broker represents that it has complied with Rule 144(f), and the Company is provided with a copy of Holder's notice of proposed sale.

4.4 Transfer Procedure. Subject to the provisions of Section 4.3, Holder may transfer all or part of this warrant or the Shares issuable upon exercise of this warrant (or the securities issuable, directly or indirectly, upon conversion of the Shares, if any) by giving the Company notice of the portion of the warrant being transferred setting forth the name, address and taxpayer identification number of the transferee and surrendering this warrant to the Company for reissuance to the transferee(s) (and Holder, if applicable). No surrender or reissuance shall be required for a transfer to an affiliate of Holder.

4.5 Notices. All notices and other communications from the Company to the Holder, or vice versa, shall be deemed delivered and effective when given personally or mailed by first-class registered or certified mail, postage prepaid, at such address as may have been furnished to

the Company or the Holder, as the case may be, in writing by the Company or such Holder from time to time. All notices to the Holder shall be addressed as follows:

Pacific Western Bank
Attn: Warrant Administrator
406 Blackwell Street, Suite 240
Durham, NC 27701

All notices to the Company shall be addressed as follows:

EVELO BIOSCIENCES, INC.
620 Memorial Drive, Suite 200 West
Cambridge, MA 02139
Attn: Chief Executive Officer
FAX: 617-577-0301

4.6 Amendments. This warrant and any term hereof may be changed, waived, discharged or terminated only by an instrument in writing signed by the party against which enforcement of such change, waiver, discharge or termination is sought.

4.7 Attorneys' Fees. In the event of any dispute between the parties concerning the terms and provisions of this warrant, the party prevailing in such dispute shall be entitled to collect from the other party all costs incurred in such dispute, including reasonable attorneys' fees.

4.8 Governing Law. This warrant shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to its principles regarding conflicts of law that would result in the application of the laws of any other jurisdiction.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the undersigned has executed this Warrant to Purchase Stock as of the date set forth above.

EVELO BIOSCIENCES, INC.

By: /s/ Jennifer Glennon
Name: Jennifer Glennon
Title: Vice President, Finance and Operations

Acknowledged and agreed:

PACIFIC WESTERN BANK

By: /s/ Stephen J. Berns
Name: Stephen J. Berns
Title: Vice President

APPENDIX 1

NOTICE OF EXERCISE

1. The undersigned hereby elects to purchase _____ shares of the _____ stock of **EVELO BIOSCIENCES, INC.** pursuant to the terms of the attached warrant, and tenders herewith payment of the purchase price of such shares in full.

1. The undersigned hereby elects to convert the attached warrant into shares in the manner specified in the warrant. This conversion is exercised with respect to _____ of the shares covered by the warrant.

[Strike paragraph that does not apply.]

2. Please issue a certificate or certificates representing said shares in the name of the undersigned or in such other name as is specified below:

(Holder's Name)

(Address)

3. The undersigned represents it is acquiring the shares solely for its own account and not as a nominee for any other party and not with a view toward the resale or distribution thereof except in compliance with applicable securities laws.

PACIFIC WESTERN BANK or Registered Assignee

(Signature)

(Date)

EXHIBIT A

INVESTMENT REPRESENTATIONS

- (a) Holder is aware of the Company's business affairs and financial condition, and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. Holder is purchasing the Securities for its own account for investment purposes only, not as a nominee or agent, and not with a view towards, or for resale in connection with, any "distribution" thereof for purposes of the Securities Act of 1933, as amended (the "Securities Act"). Holder has such knowledge and experience in financial business matters and Holder is capable of evaluating the merits and risks of the purchase of the Securities and of protecting its interests in connection therewith.
- (b) Holder understands that the Securities have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Holder's investment intent as expressed herein.
- (c) Holder further understands that the Securities must be held indefinitely, and Holder must therefore bear the economic risk therewith, unless the Securities are subsequently registered under the Securities Act or unless an exemption from registration is otherwise available. In addition, Holder understands that the certificate evidencing the Securities will be imprinted with a legend which prohibits the transfer of the Securities unless they are registered or such registration is not required.
- (d) Holder is familiar with the provisions of Rule 144, promulgated pursuant to the Securities Act, which, in substance, permits limited public resale of "restricted securities" acquired, directly or indirectly, from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions.
- (e) The Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which requires, among other things, the existence of a public market for the Securities, the availability of certain current public information about the Company, the resale occurring not less than one year after a party has purchased and paid for the security to be sold, the sales being effected through a "broker's transaction" or in transactions directly with a "market maker" and the number of securities being sold during any three-month period not exceeding specified limitations.
- (f) Holder further understands that in the event that all of the applicable requirements of Rule 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required.
- (g) Holder is an "accredited investor" as defined in Rule 501(a) of Regulation D promulgated under the Securities Act.

EVELO BIOSCIENCES, INC.

**2015 STOCK INCENTIVE PLAN
(AS AMENDED THROUGH FEBRUARY 8, 2018)****1. Purpose**

The purpose of this 2015 Stock Incentive Plan (the “**Plan**”) of Evelo Biosciences, Inc., a Delaware corporation (the “**Company**”), is to advance the interests of the Company’s stockholders by enhancing the Company’s ability to attract, retain and motivate persons who are expected to make important contributions to the Company and by providing such persons with equity ownership opportunities and performance-based incentives that are intended to better align the interests of such persons with those of the Company’s stockholders. Except where the context otherwise requires, the term “**Company**” shall include any of the Company’s present or future parent or subsidiary corporations as defined in Sections 424(e) or (f) of the Internal Revenue Code of 1986, as amended, and any regulations thereunder (the “**Code**”) and any other business venture (including, without limitation, joint venture or limited liability company) in which the Company has a controlling interest, as determined by the Board of Directors of the Company (the “**Board**”); *provided, however*, that such other business ventures shall be limited to entities that, where required by Section 409A of the Code, are eligible issuers of service recipient stock (as defined in Treas. Reg. Section 1.409A-1(b)(5)(iii)(E), or applicable successor regulation).

2. Eligibility

All of the Company’s employees, officers and directors, as well as consultants and advisors to the Company (as such terms consultants and advisors are defined and interpreted for purposes of Rule 701 under the Securities Act of 1933, as amended (the “**Securities Act**”) (or any successor rule)) are eligible to be granted Awards under the Plan. Each person who is granted an Award under the Plan is deemed a “**Participant**.” “**Award**” means Options (as defined in Section 5), SARs (as defined in Section 6), Restricted Stock (as defined in Section 7), Restricted Stock Units (as defined in Section 7) and Other Stock-Based Awards (as defined in Section 8).

3. Administration and Delegation

(a) Administration by the Board. The Plan will be administered by the Board. The Board shall have authority to grant Awards and to adopt, amend and repeal such administrative rules, guidelines and practices relating to the Plan as it shall deem advisable. The Board may construe and interpret the terms of the Plan and any Award agreements entered into under the Plan. The Board may correct any defect, supply any omission or reconcile any inconsistency in the Plan or any Award in the manner and to the extent it shall deem expedient to carry the Plan into effect and it shall be the sole and final judge of such expediency. All decisions by the Board shall be made in the Board’s sole discretion and shall be final and binding on all persons having or claiming any interest in the Plan or in any Award.

(b) Appointment of Committees. To the extent permitted by applicable law, the Board may delegate any or all of its powers under the Plan to one or more committees or subcommittees of the Board (each, a “**Committee**”). All references in the Plan to the “**Board**” shall mean the Board or a Committee of the Board to the extent that the Board’s powers or authority under the Plan have been delegated to such Committee.

4. Stock Available for Awards

(a) Number of Shares. Subject to adjustment under Section 9, Awards may be made under the Plan for up to 20,702,933 shares of common stock, \$0.001 par value per share, of the Company (the “**Common Stock**”), any or all of which Awards may be in the form of Incentive Stock Options (as defined in Section 5(b)). If any Award expires or is terminated, surrendered or canceled without having been fully exercised, is forfeited in whole or in part (including as the result of shares of Common Stock subject to such Award being repurchased by the Company at the original issuance price pursuant to a contractual repurchase right), or results in any Common Stock not being issued, the unused Common Stock covered by such Award shall again be available for the grant of Awards under the Plan. Further, shares of Common Stock tendered to the Company by a Participant to exercise an Award or to satisfy tax withholding obligations arising with respect to an Award shall be added to the number of shares of Common Stock available for the grant of Awards under the Plan. However, in the case of Incentive Stock Options, the two immediately preceding sentences shall be subject to any limitations under the Code. Shares issued under the Plan may consist in whole or in part of authorized but unissued shares or treasury shares.

(b) Substitute Awards. In connection with a merger or consolidation of an entity with the Company or the acquisition by the Company of property or stock of an entity, the Board may grant Awards in substitution for any options or other stock or stock-based awards granted by such entity or an affiliate thereof. Substitute Awards may be granted on such terms as the Board deems appropriate in the circumstances, notwithstanding any limitations on Awards contained in the Plan. Substitute Awards shall not count against the overall share limit set forth in Section 4(a), except as may be required by reason of Section 422 and related provisions of the Code.

5. Stock Options

(a) General. The Board may grant options to purchase Common Stock (each, an “**Option**”) and determine the number of shares of Common Stock to be covered by each Option, the exercise price of each Option and the conditions and limitations applicable to the exercise of each Option, including conditions relating to applicable federal or state securities laws, as it considers necessary or advisable.

(b) Incentive Stock Options. An Option that the Board intends to be an “incentive stock option” as defined in Section 422 of the Code (an “**Incentive Stock Option**”) shall only be granted to employees of Evelo Biosciences, Inc., any of Evelo Biosciences, Inc.’s present or future parent or subsidiary corporations as defined in Sections 424(e) or (f) of the Code, and any other entities the employees of which are eligible to receive Incentive Stock Options under the Code, and shall be subject to and shall be construed consistently with the requirements of Section 422 of the Code. An Option that is not intended to be an Incentive Stock Option shall be designated a “**Nonstatutory Stock Option**.” The Company shall have no liability to a Participant, or any other party, if an Option (or any part thereof) that is intended to be an Incentive Stock Option is not an Incentive Stock Option or if the Company converts an Incentive Stock Option to a Nonstatutory Stock Option.

(c) **Exercise Price.** The Board shall establish the exercise price of each Option and specify the exercise price in the applicable Option agreement. The exercise price shall be not less than 100% of the fair market value per share of Common Stock, as determined by (or in a manner approved by) the Board (“**Fair Market Value**”), on the date the Option is granted. “**Fair Market Value**” of a share of Common Stock for purposes of the Plan will be determined as follows:

(1) if the Common Stock is not publicly traded, the Board will determine the Fair Market Value for purposes of the Plan using any measure of value it determines to be appropriate (including, as it considers appropriate, relying on appraisals) in a manner consistent with the valuation principles under Code Section 409A, except as the Board may expressly determine otherwise;

(2) if the Common Stock trades on a national securities exchange, the closing sale price (for the primary trading session) on the date of grant; or

(3) if the Common Stock does not trade on any such exchange, the average of the closing bid and asked prices as reported by an authorized OTCBB market data vendor as listed on the OTCBB website (otcbb.com) on the date of grant.

For any date that is not a trading day, the Fair Market Value of a share of Common Stock for such date will be determined by using the closing sale price or average of the bid and asked prices, as appropriate, for the immediately preceding trading day and with the timing in the formulas above adjusted accordingly. The Board can substitute a particular time of day or other measure of “closing sale price” or “bid and asked prices” if appropriate because of exchange or market procedures or can, in its sole discretion, use weighted averages either on a daily basis or such longer period as complies with Code Section 409A.

The Board has sole discretion to determine the Fair Market Value for purposes of the Plan, and all Awards are conditioned on the participants’ agreement that the Administrator’s determination is conclusive and binding even though others might make a different determination.

(d) **Duration of Options.** Each Option shall be exercisable at such times and subject to such terms and conditions as the Board may specify in the applicable option agreement; *provided, however*, that no Option will be granted with a term in excess of 10 years.

(e) **Exercise of Options.** Options may be exercised by delivery to the Company of a notice of exercise in a form of notice (which may be electronic) approved by the Company, together with payment in full (in a manner specified in Section 5(f)) of the exercise price for the number of shares for which the Option is exercised. Shares of Common Stock subject to the Option will be delivered by the Company as soon as practicable following exercise.

(f) Payment upon Exercise. Common Stock purchased upon the exercise of an Option granted under the Plan shall be paid for as follows:

(1) in cash or by check, payable to the order of the Company;

(2) when the Common Stock is registered under the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), except as may otherwise be provided in the applicable Option agreement or approved by the Board, in its sole discretion, by (i) delivery of an irrevocable and unconditional undertaking by a creditworthy broker to deliver promptly to the Company sufficient funds to pay the exercise price and any required tax withholding or (ii) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a creditworthy broker to deliver promptly to the Company cash or a check sufficient to pay the exercise price and any required tax withholding;

(3) when the Common Stock is registered under the Exchange Act and to the extent provided for in the applicable Option agreement or approved by the Board, in its sole discretion, by delivery (either by actual delivery or attestation) of shares of Common Stock owned by the Participant valued at their Fair Market Value, *provided* (i) such method of payment is then permitted under applicable law, (ii) such Common Stock, if acquired directly from the Company, was owned by the Participant for such minimum period of time, if any, as may be established by the Board in its discretion and (iii) such Common Stock is not subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements;

(4) to the extent provided for in the applicable Nonstatutory Stock Option agreement or approved by the Board in its sole discretion, by delivery of a notice of “net exercise” to the Company, as a result of which the Participant would pay the exercise price for the portion of the Option being exercised by cancelling a portion of the Option for such number of shares as is equal to the exercise price divided by the excess of the Fair Market Value on the date of exercise over the Option exercise price per share.

(5) to the extent permitted by applicable law and provided for in the applicable Option agreement or approved by the Board, in its sole discretion, by (i) delivery of a promissory note of the Participant to the Company on terms determined by the Board, or (ii) payment of such other lawful consideration as the Board may determine; or

(6) by any combination of the above permitted forms of payment.

6. Stock Appreciation Rights

(a) General. The Board may grant Awards consisting of stock appreciation rights (“**SARs**”) entitling the holder, upon exercise, to receive an amount of Common Stock or cash or a combination thereof (such form to be determined by the Board) determined by reference to appreciation, from and after the date of grant, in the Fair Market Value of a share of Common Stock over the measurement price established pursuant to Section 6(b). The date as of which such appreciation is determined shall be the exercise date.

(b) Measurement Price. The Board shall establish the measurement price of each SAR and specify it in the applicable SAR agreement. The measurement price shall not be less than 100% of the Fair Market Value on the date the SAR is granted.

(c) Duration of SARs. Each SAR shall be exercisable at such times and subject to such terms and conditions as the Board may specify in the applicable SAR agreement; *provided, however*, that no SAR will be granted with a term in excess of 10 years.

(d) Exercise of SARs. SARs may be exercised by delivery to the Company of a notice of exercise in a form (which may be electronic) approved by the Company, together with any other documents required by the Board.

7. Restricted Stock; Restricted Stock Units

(a) General. The Board may grant Awards entitling recipients to acquire shares of Common Stock (“**Restricted Stock**”), subject to the right of the Company to repurchase all or part of such shares at their issue price or other stated or formula price (or to require forfeiture of such shares if issued at no cost) from the recipient in the event that conditions specified by the Board in the applicable Award are not satisfied prior to the end of the applicable restriction period or periods established by the Board for such Award. The Board may also grant Awards entitling the recipient to receive shares of Common Stock or cash to be delivered at the time such Award vests (“**Restricted Stock Units**”) (Restricted Stock and Restricted Stock Units are each referred to herein as a “**Restricted Stock Award**”).

(b) Terms and Conditions for All Restricted Stock Awards. The Board shall determine the terms and conditions of a Restricted Stock Award, including the conditions for vesting and repurchase (or forfeiture) and the issue price, if any.

(c) Additional Provisions Relating to Restricted Stock.

(1) Dividends. Unless otherwise provided in the applicable Award agreement, any dividends (whether paid in cash, stock or property) declared and paid by the Company with respect to shares of Restricted Stock (“**Accrued Dividends**”) shall be paid to the Participant only if and when such shares become free from the restrictions on transferability and forfeitability that apply to such shares. Each payment of Accrued Dividends will be made no later than the end of the calendar year in which the dividends are paid to stockholders of that class of stock or, if later, the 15th day of the third month following the lapsing of the restrictions on transferability and the forfeitability provisions applicable to the underlying shares of Restricted Stock.

(2) Stock Certificates. The Company may require that any stock certificates issued in respect of shares of Restricted Stock, as well as dividends or distributions paid on such Restricted Stock, shall be deposited in escrow by the Participant, together with a stock power endorsed in blank, with the Company (or its designee). At the expiration of the applicable restriction periods, the Company (or such designee) shall deliver the certificates no longer subject to such restrictions to the Participant or if the Participant has died, to Participant's Designated Beneficiary. "**Designated Beneficiary**" means (i) the beneficiary designated, in a manner determined by the Board, by a Participant to receive amounts due or exercise rights of the Participant in the event of the Participant's death or (ii) in the absence of an effective designation by a Participant, "**Designated Beneficiary**" the Participant's estate.

(d) Additional Provisions Relating to Restricted Stock Units.

(1) Settlement. Upon the vesting of and/or lapsing of any other restrictions (i.e., settlement) with respect to each Restricted Stock Unit, the Participant shall be entitled to receive from the Company one share of Common Stock or (if so provided in the applicable Award agreement) an amount of cash equal to the Fair Market Value of one share of Common Stock. The Board may, in its discretion, provide that settlement of Restricted Stock Units shall be deferred, on a mandatory basis or at the election of the Participant in a manner that complies with Section 409A of the Code.

(2) Voting Rights. A Participant shall have no voting rights with respect to any Restricted Stock Units.

(3) Dividend Equivalents. The Award agreement for Restricted Stock Units may provide Participants with the right to receive an amount equal to any dividends or other distributions declared and paid on an equal number of outstanding shares of Common Stock ("**Dividend Equivalents**"). Dividend Equivalents may be paid currently or credited to an account for the Participants, may be settled in cash and/or shares of Common Stock and may be subject to the same restrictions on transfer and forfeitability as the Restricted Stock Units with respect to which paid, in each case to the extent provided in the applicable Award agreement.

8. Other Stock-Based Awards

(a) General. Other Awards of shares of Common Stock, and other Awards that are valued in whole or in part by reference to, or are otherwise based on, shares of Common Stock or other property, may be granted hereunder to Participants ("**Other Stock-Based-Awards**"). Such Other Stock-Based Awards shall also be available as a form of payment in the settlement of other Awards granted under the Plan or as payment in lieu of compensation to which a Participant is otherwise entitled. Other Stock-Based Awards may be paid in shares of Common Stock or cash, as the Board shall determine.

(b) Terms and Conditions. Subject to the provisions of the Plan, the Board shall determine the terms and conditions of each Other Stock-Based Award, including any purchase price applicable thereto.

9. Adjustments for Changes in Common Stock and Certain Other Events

(a) Changes in Capitalization. In the event of any stock split, reverse stock split, stock dividend, recapitalization, combination of shares, reclassification of shares, spin-off or other similar change in capitalization or event, or any dividend or distribution to holders of Common Stock other than an ordinary cash dividend, (i) the number and class of securities available under the Plan, (ii) the number and class of securities and exercise price per share of each outstanding Option, (iii) the share and per-share provisions and the measurement price of each outstanding SAR, (iv) the number of shares subject to and the repurchase price per share subject to each outstanding Restricted Stock Award and (v) the share and per-share-related provisions and the purchase price, if any, of each outstanding Other Stock-Based Award, shall be equitably adjusted by the Company (or substituted Awards may be made, if applicable) in the manner determined by the Board. Without limiting the generality of the foregoing, in the event the Company effects a split of the Common Stock by means of a stock dividend and the exercise price of and the number of shares subject to an outstanding Option are adjusted as of the date of the distribution of the dividend (rather than as of the record date for such dividend), then an optionee who exercises an Option between the record date and the distribution date for such stock dividend shall be entitled to receive, on the distribution date, the stock dividend with respect to the shares of Common Stock acquired upon such Option exercise, notwithstanding the fact that such shares were not outstanding as of the close of business on the record date for such stock dividend.

(b) Reorganization Events.

(1) Definition. A “**Reorganization Event**” shall mean: (a) any merger or consolidation of the Company with or into another entity as a result of which all of the Common Stock of the Company is converted into or exchanged for the right to receive cash, securities or other property or is cancelled, (b) any transfer or disposition of all of the Common Stock of the Company for cash, securities or other property pursuant to a share exchange or other transaction or (c) any liquidation or dissolution of the Company.

(2) Consequences of a Reorganization Event on Awards Other than Restricted Stock.

(i) In connection with a Reorganization Event, the Board may take any one or more of the following actions as to all or any (or any portion of) outstanding Awards other than Restricted Stock on such terms as the Board determines (except to the extent specifically provided otherwise in an applicable Award agreement or another agreement between the Company and the Participant): (i) provide that such Awards shall be assumed, or substantially equivalent Awards shall be substituted, by the acquiring or succeeding corporation (or an affiliate thereof), (ii) upon written notice to a Participant, provide that all of the Participant’s unexercised Awards will terminate immediately prior to the consummation of such Reorganization Event unless exercised by the Participant (to the extent then exercisable) within a specified period following the date of such notice, (iii) provide that outstanding Awards shall become exercisable, realizable, or deliverable, or restrictions applicable to an Award shall lapse, in whole or in part prior to or upon such Reorganization Event, (iv) in the event of a Reorganization Event under the terms of which holders of Common Stock will receive upon

consummation thereof a cash payment for each share surrendered in the Reorganization Event (the “**Acquisition Price**”), make or provide for a cash payment to Participants with respect to each Award held by a Participant equal to (A) the number of shares of Common Stock subject to the vested portion of the Award (after giving effect to any acceleration of vesting that occurs upon or immediately prior to such Reorganization Event) multiplied by (B) the excess, if any, of (I) the Acquisition Price over (II) the exercise, measurement or purchase price of such Award and any applicable tax withholdings, in exchange for the termination of such Award, (v) provide that, in connection with a liquidation or dissolution of the Company, Awards shall convert into the right to receive liquidation proceeds (if applicable, net of the exercise, measurement or purchase price thereof and any applicable tax withholdings) and (vi) any combination of the foregoing. In taking any of the actions permitted under this Section 9(b)(2), the Board shall not be obligated by the Plan to treat all Awards, all Awards held by a Participant, or all Awards of the same type, identically.

(ii) Notwithstanding the terms of Section 9(b)(2)(i), in the case of outstanding Restricted Stock Units that are subject to Section 409A of the Code: (i) if the applicable Restricted Stock Unit agreement provides that the Restricted Stock Units shall be settled upon a “change in control event” within the meaning of Treasury Regulation Section 1.409A-3(i)(5)(i), and the Reorganization Event constitutes such a “change in control event”, then no assumption or substitution shall be permitted pursuant to Section 9(b)(2)(i)(i) and the Restricted Stock Units shall instead be settled in accordance with the terms of the applicable Restricted Stock Unit agreement; and (ii) the Board may only undertake the actions set forth in clauses (iii), (iv) or (v) of Section 9(b)(2)(i) if the Reorganization Event constitutes a “change in control event” as defined under Treasury Regulation Section 1.409A-3(i)(5)(i) and such action is permitted or required by Section 409A of the Code; if the Reorganization Event is not a “change in control event” as so defined or such action is not permitted or required by Section 409A of the Code, and the acquiring or succeeding corporation does not assume or substitute the Restricted Stock Units pursuant to clause (i) of Section 9(b)(2)(i), then the unvested Restricted Stock Units shall terminate immediately prior to the consummation of the Reorganization Event without any payment in exchange therefor.

(iii) For purposes of Section 9(b)(2)(i)(i), an Award (other than Restricted Stock) shall be considered assumed if, following consummation of the Reorganization Event, such Award confers the right to purchase or receive pursuant to the terms of such Award, for each share of Common Stock subject to the Award immediately prior to the consummation of the Reorganization Event, the consideration (whether cash, securities or other property) received as a result of the Reorganization Event by holders of Common Stock for each share of Common Stock held immediately prior to the consummation of the Reorganization Event (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding shares of Common Stock); *provided, however*, that if the consideration received as a result of the Reorganization Event is not solely common stock of the acquiring or succeeding corporation (or an affiliate thereof), the Company may, with the consent of the acquiring or succeeding corporation, provide for the consideration to be received upon the exercise or settlement of the Award to consist solely of such number of shares of common stock of the acquiring or succeeding corporation (or an affiliate thereof) that the Board determined to be equivalent in value (as of the date of such determination or another date specified by the Board) to the per share consideration received by holders of outstanding shares of Common Stock as a result of the Reorganization Event.

(3) Consequences of a Reorganization Event on Restricted Stock. Upon the occurrence of a Reorganization Event other than a liquidation or dissolution of the Company, the repurchase and other rights of the Company with respect to outstanding Restricted Stock shall inure to the benefit of the Company's successor and shall, unless the Board determines otherwise, apply to the cash, securities or other property which the Common Stock was converted into or exchanged for pursuant to such Reorganization Event in the same manner and to the same extent as they applied to such Restricted Stock; *provided, however*, that the Board may provide for termination or deemed satisfaction of such repurchase or other rights under the instrument evidencing any Restricted Stock or any other agreement between a Participant and the Company, either initially or by amendment. Upon the occurrence of a Reorganization Event involving the liquidation or dissolution of the Company, except to the extent specifically provided to the contrary in the instrument evidencing any Restricted Stock or any other agreement between a Participant and the Company, all restrictions and conditions on all Restricted Stock then outstanding shall automatically be deemed terminated or satisfied.

10. General Provisions Applicable to Awards.

(a) Transferability of Awards. Awards (or any interest in an Award, including, prior to exercise, any interest in shares of Common Stock issuable upon exercise of an Option or SAR) shall not be sold, assigned, transferred (including by establishing any short position, put equivalent position (as defined in Rule 16a-1 issued under the Exchange Act) or call equivalent position (as defined in Rule 16a-1 issued under the Exchange Act)), pledged, hypothecated or otherwise encumbered by the person to whom they are granted, either voluntarily or by operation of law, and, during the life of the Participant, shall be exercisable only by the Participant; except that Awards, other than Awards subject to Section 409A of the Code, may be transferred to family members (as defined in Rule 701(c)(3) under the Securities Act) through gifts or (other than Incentive Stock Options) domestic relations orders or to an executor or guardian upon the death or disability of the Participant. The Company shall not be required to recognize any such permitted transfer until such time as such permitted transferee shall deliver to the Company a written instrument, as a condition to such transfer, in form and substance satisfactory to the Company confirming that such transferee shall be bound by all of the terms and conditions of the Award. References to a Participant, to the extent relevant in the context, shall include references to authorized transferees. For the avoidance of doubt, nothing contained in this Section 10(a) shall be deemed to restrict a transfer to the Company.

(b) Documentation. Each Award shall be evidenced in such form (written, electronic or otherwise) as the Board shall determine. Each Award may contain terms and conditions in addition to those set forth in the Plan.

(c) Board Discretion. Except as otherwise provided by the Plan, each Award may be made alone or in addition or in relation to any other Award. The terms of each Award need not be identical, and the Board need not treat Participants uniformly.

(d) Termination of Status. The Board shall determine the effect on an Award of the disability, death, termination or other cessation of employment, authorized leave of absence or other change in the employment or other status of a Participant and the extent to which, and the period during which, the Participant, or the Participant's legal representative, conservator, guardian or Designated Beneficiary, may exercise rights under the Award.

(e) Withholding. The Participant must satisfy all applicable federal, state, and local or other income and employment tax withholding obligations before the Company will deliver stock certificates or otherwise recognize ownership of Common Stock under an Award. The Company may decide to satisfy the withholding obligations through additional withholding on salary or wages. If the Company elects not to or cannot withhold from other compensation, the Participant must pay the Company the full amount, if any, required for withholding or have a broker tender to the Company cash equal to the withholding obligations. Payment of withholding obligations is due before the Company will issue any shares on exercise, vesting or release from forfeiture of an Award or at the same time as payment of the exercise or purchase price unless the Company determines otherwise. If provided for in an Award or approved by the Board in its sole discretion, a Participant may satisfy such tax obligations in whole or in part by delivery (either by actual delivery or attestation) of shares of Common Stock, including shares retained from the Award creating the tax obligation, valued at their Fair Market Value; *provided, however*, except as otherwise provided by the Board, that the total tax withholding where stock is being used to satisfy such tax obligations cannot exceed the Company's minimum statutory withholding obligations (based on minimum statutory withholding rates for federal and state tax purposes, including payroll taxes, that are applicable to such supplemental taxable income). Shares used to satisfy tax withholding requirements cannot be subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements.

(f) Amendment of Award.

(1) The Board may amend, modify or terminate any outstanding Award, including but not limited to, substituting therefor another Award of the same or a different type, changing the date of exercise or realization, and converting an Incentive Stock Option to a Nonstatutory Stock Option. The Participant's consent to such action shall be required unless (i) the Board determines that the action, taking into account any related action, does not materially and adversely affect the Participant's rights under the Plan or (ii) the change is permitted under Section 9.

(2) The Board may, without stockholder approval, amend any outstanding Award granted under the Plan to provide an exercise price per share that is lower than the then-current exercise price per share of such outstanding Award. The Board may also, without stockholder approval, cancel any outstanding award (whether or not granted under the Plan) and grant in substitution therefor new Awards under the Plan covering the same or a different number of shares of Common Stock and having an exercise price per share lower than the then-current exercise price per share of the cancelled award.

(g) Conditions on Delivery of Stock. The Company will not be obligated to deliver any shares of Common Stock pursuant to the Plan or to remove restrictions from shares previously issued or delivered under the Plan until (i) all conditions of the Award have been met or removed to the satisfaction of the Company, (ii) in the opinion of the Company's counsel, all other legal matters in connection with the issuance and delivery of such shares have been satisfied, including any applicable securities laws and regulations and any applicable stock exchange or stock market rules and regulations, and (iii) the Participant has executed and delivered to the Company such representations or agreements as the Company may consider appropriate to satisfy the requirements of any applicable laws, rules or regulations.

(h) Acceleration. The Board may at any time provide that any Award shall become immediately exercisable in whole or in part, free of some or all restrictions or conditions, or otherwise realizable in whole or in part, as the case may be.

11. Miscellaneous.

(a) No Right to Employment or Other Status. No person shall have any claim or right to be granted an Award by virtue of the adoption of the Plan, and the grant of an Award shall not be construed as giving a Participant the right to continued employment or any other relationship with the Company. The Company expressly reserves the right at any time to dismiss or otherwise terminate its relationship with a Participant free from any liability or claim under the Plan, except as expressly provided in the applicable Award.

(b) No Rights as Stockholder. Subject to the provisions of the applicable Award, no Participant or Designated Beneficiary shall have any rights as a stockholder with respect to any shares of Common Stock to be distributed with respect to an Award until becoming the record holder of such shares.

(c) Effective Date and Term of Plan. The Plan shall become effective on the date on which it is adopted by the Board. No Awards shall be granted under the Plan after the expiration of 10 years from the earlier of (i) the date on which the Plan was adopted by the Board or (ii) the date the Plan was approved by the Company's stockholders, but Awards previously granted may extend beyond that date.

(d) Amendment of Plan. The Board may amend, suspend or terminate the Plan or any portion thereof at any time; *provided* that if at any time the approval of the Company's stockholders is required as to any modification or amendment under Section 422 of the Code or any successor provision with respect to Incentive Stock Options, the Board may not effect such modification or amendment without such approval. Unless otherwise specified in the amendment, any amendment to the Plan adopted in accordance with this Section 11(d) shall apply to, and be binding on the holders of, all Awards outstanding under the Plan at the time the amendment is adopted, provided the Board determines that such amendment, taking into account any related action, does not materially and adversely affect the rights of Participants under the Plan.

(e) Authorization of Sub-Plans (including Grants to non-U.S. Employees). The Board may from time to time establish one or more sub-plans under the Plan for purposes of satisfying applicable securities, tax or other laws of various jurisdictions. The Board shall establish such sub-plans by adopting supplements to the Plan containing (i) such limitations on the Board's discretion under the Plan as the Board deems necessary or desirable or (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 Company shall not be required to provide copies of any supplement to Participants in any jurisdiction which is not the subject of such supplement.

(f) Compliance with Section 409A of the Code. Except as provided in individual Award agreements initially or by amendment, if and to the extent (i) any portion of any payment, compensation or other benefit provided to a Participant pursuant to the Plan in connection with Participant's employment termination constitutes "nonqualified deferred compensation" within the meaning of Section 409A of the Code and (ii) the Participant is a specified employee as defined in Section 409A(a)(2)(B)(i) of the Code, in each case as determined by the Company in accordance with its procedures, by which determinations the Participant (through accepting the Award) agrees that the Participant is bound, such portion of the payment, compensation or other benefit shall not be paid before the day that is six months plus one day after the date of "separation from service" (as determined under Section 409A of the Code) (the "**New Payment Date**"), except as Section 409A of the Code may then permit. The aggregate of any payments that otherwise would have been paid to the Participant during the period between the date of separation from service and the New Payment Date shall be paid to the Participant in a lump sum on such New Payment Date, and any remaining payments will be paid on their original schedule.

The Company makes no representations or warranty and shall have no liability to the Participant or any other person if any provisions of or payments, compensation or other benefits under the Plan are determined to constitute nonqualified deferred compensation subject to Section 409A of the Code but do not to satisfy the conditions of that section.

(g) Limitations on Liability. Notwithstanding any other provisions of the Plan, no individual acting as a director, officer, other employee, or agent of the Company will be liable to any Participant, former Participant, spouse, beneficiary, or any other person for any claim, loss, liability, or expense incurred in connection with the Plan, nor will such individual be personally liable with respect to the Plan because of any contract or other instrument such individual executes in such individual's capacity as a director, officer, other employee, or agent of the Company. The Company will indemnify and hold harmless each director, officer, other employee, or agent of the Company to whom any duty or power relating to the administration or interpretation of the Plan has been or will be delegated, against any cost or expense (including attorneys' fees) or liability (including any sum paid in settlement of a claim with the Board's approval) arising out of any act or omission to act concerning the Plan unless arising out of such person's own fraud or bad faith.

(h) Governing Law. The provisions of the Plan and all Awards made hereunder shall be governed by and interpreted in accordance with the laws of the State of Delaware, excluding choice-of-law principles of the law of such state that would require the application of the laws of a jurisdiction other than the State of Delaware.

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**EVELO BIOSCIENCES, INC.
2015 STOCK INCENTIVE PLAN**

CALIFORNIA SUPPLEMENT

Pursuant to Section 11(e) of the Plan, the Board has adopted this supplement for purposes of satisfying the requirements of Section 25102(o) of the California Law:

Any Awards granted under the Plan to a Participant who is a resident of the State of California on the date of grant (a “**California Participant**”) shall be subject to the following additional limitations, terms and conditions:

1. **Additional Limitations on Options.**

(a) **Maximum Duration of Options.** No Options granted to California Participants shall have a term in excess of 10 years measured from the Option grant date.

(b) **Minimum Exercise Period Following Termination.** Unless a California Participant’s employment is terminated for cause (as defined by applicable law, the terms of the Plan or option grant or a contract of employment), in the event of termination of employment of such Participant, such Participant shall have the right to exercise an Option, to the extent that such Participant is entitled to exercise such Option on the date employment terminated, until the earlier of: (i) at least six months from the date of termination, if termination was caused by such Participant’s death or disability, (ii) at least 30 days from the date of termination, if termination was caused other than by such Participant’s death or disability and (iii) the Option expiration date.

2. **Additional Limitations for Other Stock-Based Awards.** The terms of all Awards granted to a California Participant under Section 8 of the Plan shall comply, to the extent applicable, with Sections 260.140.42, 260.140.45 and 260.140.46 of the California Code of Regulations.

3. **Additional Limitations on Timing of Awards.** No Award granted to a California Participant shall become exercisable, vested or realizable, as applicable to such Award, unless the Plan has been approved by the holders of a majority of the Company’s outstanding voting securities by the later of (i) within 12 months before or after the date the Plan was adopted by the Board, or (ii) prior to or within 12 months of the granting of any Award to a California Participant.

4. **Additional Restriction Regarding Recapitalizations, Stock Splits, Etc.** For purposes of Section 9 of the Plan, in the event of a stock split, reverse stock split, stock dividend, recapitalization, combination, reclassification or other distribution of the Company’s securities underlying the Award without the receipt of consideration by the Company, the number of securities purchasable, and in the case of Options, the exercise price of such Options, must be proportionately adjusted.

5. **Additional Limitations on Transferability of Awards.** Notwithstanding the provisions of Section 10(a) of the Plan, an Award granted to a California Participant may not be transferred to an executor or guardian upon the disability of the Participant.

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NONSTATUTORY STOCK OPTION AGREEMENT
GRANTED UNDER 2015 STOCK INCENTIVE PLAN

1. Grant of Option.

This Nonstatutory Stock Option Agreement (the “**Agreement**”) evidences the grant by Evelo Biosciences, Inc., a Delaware corporation (the “**Company**”), on [], 20 [] (the “**Grant Date**”) to [], an employee, consultant or director of the Company (the “**Participant**”), of an option to purchase, in whole or in part, on the terms provided herein and in the Company’s 2015 Stock Incentive Plan (the “**Plan**”), a total of [] shares (the “**Shares**”) of common stock, \$0.001 par value per share, of the Company (“**Common Stock**”) at \$[] per Share. Unless earlier terminated, this option shall expire at 5:00 p.m., Eastern time, on [], 20 [] [date is ten years minus one day from grant date] (the “**Final Exercise Date**”).

It is intended that the option evidenced by this Agreement shall not be an incentive stock option as defined in Section 422 of the Internal Revenue Code of 1986, as amended, and any regulations promulgated thereunder (the “**Code**”). Except as otherwise indicated by the context, the term “**Participant**”, as used in this option, shall be deemed to include any person who acquires the right to exercise this option validly under its terms.

2. Vesting Schedule.

This option will become exercisable (“**vest**”) as to 25% of the original number of Shares on the first anniversary of the Vesting Commencement Date (as defined below) and as to an additional 6.25% of the original number of Shares at the end of each successive quarter following the first anniversary of the Vesting Commencement Date until the fourth anniversary of the Vesting Commencement Date. On the fourth anniversary of the Vesting Commencement Date, this option will be exercisable as to all Shares. For purposes of this Agreement, “**Vesting Commencement Date**” shall mean [].

The right of exercise shall be cumulative so that to the extent the option is not exercised in any period to the maximum extent permissible it shall continue to be exercisable, in whole or in part, with respect to all Shares for which it is vested until the earlier of the Final Exercise Date or the termination of this option under Section 3 hereof or the Plan.

3. Exercise of Option.

(a) Form of Exercise. Each election to exercise this option shall be accompanied by a completed Notice of Stock Option Exercise in the form attached hereto as Exhibit A, signed by the Participant, and received by the Company at its principal office, accompanied by this Agreement, and payment in full in the manner provided in the Plan. The Participant may purchase less than the number of Shares covered hereby, provided that no partial exercise of this option may be for any fractional share or for fewer than ten whole shares.

(b) Continuous Relationship with the Company Required. Except as otherwise provided in this Section 3, this option may not be exercised unless the Participant, at the time he or she exercises this option, is, and has been at all times since the Grant Date, an employee, officer or director of, or consultant or advisor to, the Company or any other entity the employees, officers, directors, consultants, or advisors of which are eligible to receive option grants under the Plan (an “**Eligible Participant**”).

(c) Termination of Relationship with the Company. If the Participant ceases to be an Eligible Participant for any reason, then, except as provided in paragraphs (d) and (e) below, the right to exercise this option shall terminate three months after such cessation (but in no event after the Final Exercise Date), provided that this option shall be exercisable only to the extent that the Participant was entitled to exercise this option on the date of such cessation. Notwithstanding the foregoing, if the Participant, prior to the Final Exercise Date, violates the non-competition or confidentiality provisions of any employment contract, confidentiality and nondisclosure agreement or other agreement between the Participant and the Company, the right to exercise this option shall terminate immediately upon such violation.

(d) Exercise Period Upon Death or Disability. If the Participant dies or becomes disabled (within the meaning of Section 22(e)(3) of the Code) prior to the Final Exercise Date while he or she is an Eligible Participant and the Company has not terminated such relationship for “cause” as specified in paragraph (e) below, this option shall be exercisable, within the period of one year following the date of death or disability of the Participant, by the Participant (or in the case of death by an authorized transferee), provided that this option shall be exercisable only to the extent that this option was exercisable by the Participant on the date of his or her death or disability, and further provided that this option shall not be exercisable after the Final Exercise Date.

(e) Termination for Cause. If, prior to the Final Exercise Date, the Participant’s employment or other relationship with the Company is terminated by the Company for Cause (as defined below), the right to exercise this option shall terminate immediately upon the effective date of such termination of employment or other relationship. If, prior to the Final Exercise Date, the Participant is given notice by the Company of the termination of his or her employment or other relationship by the Company for Cause, and the effective date of such employment or other termination is subsequent to the date of the delivery of such notice, the right to exercise this option shall be suspended from the time of the delivery of such notice until the earlier of (i) such time as it is determined or otherwise agreed that the Participant’s employment or other relationship shall not be terminated for Cause as provided in such notice or (ii) the effective date of such termination of employment or other relationship (in which case the right to exercise this option shall, pursuant to the preceding sentence, terminate immediately upon the effective date of such termination of employment or other relationship). If the Participant is party to an employment, consulting or severance agreement with the Company that contains a definition of “cause” for termination of employment or other relationship, “Cause” shall have the meaning ascribed to such term in such agreement. Otherwise, “Cause” shall mean willful misconduct by the Participant or willful failure by the Participant to perform his or her responsibilities to the Company (including, without limitation, breach by the Participant of any provision of any employment, consulting, advisory, nondisclosure, non-competition or other similar agreement between the Participant and the Company), as determined by the Company, which determination shall be conclusive. The Participant’s employment or other relationship shall be considered to have been terminated for “Cause” if the Company determines, within 30 days after the Participant’s resignation, that termination for Cause was warranted.

4. Company Right of First Refusal.

(a) Notice of Proposed Transfer. If the Participant proposes to sell, assign, transfer, pledge, hypothecate or otherwise dispose of, by operation of law or otherwise (collectively, “transfer”) any Shares acquired upon exercise of this option, then the Participant shall first give written notice of the proposed transfer (the “**Transfer Notice**”) to the Company. The Transfer Notice shall name the proposed transferee and state the number of such Shares the Participant proposes to transfer (the “**Offered Shares**”), the price per share and all other material terms and conditions of the transfer.

(b) Company Right to Purchase. For 30 days following its receipt of such Transfer Notice, the Company shall have the option to purchase all or part of the Offered Shares at the price and upon the terms set forth in the Transfer Notice. In the event the Company elects to purchase all or part of the Offered Shares, it shall give written notice of such election to the Participant within such 30-day period. Within 10 days after his or her receipt of such notice, the Participant shall tender to the Company at its principal offices the certificate or certificates representing the Offered Shares to be purchased by the Company, duly endorsed in blank by the Participant or with duly endorsed stock powers attached thereto, all in a form suitable for transfer of the Offered Shares to the Company. Promptly following receipt of such certificate or certificates, the Company shall deliver or mail to the Participant a check in payment of the purchase price for such Offered Shares; provided that if the terms of payment set forth in the Transfer Notice were other than cash against delivery, the Company may pay for the Offered Shares on the same terms and conditions as were set forth in the Transfer Notice; and provided further that any delay in making such payment shall not invalidate the Company’s exercise of its option to purchase the Offered Shares.

(c) Shares Not Purchased By Company. If the Company does not elect to acquire all of the Offered Shares, the Participant may, within the 30-day period following the expiration of the option granted to the Company under subsection (b) above, transfer the Offered Shares which the Company has not elected to acquire to the proposed transferee, provided that such transfer shall not be on terms and conditions more favorable to the transferee than those contained in the Transfer Notice. Notwithstanding any of the above, all Offered Shares transferred pursuant to this Section 4 shall remain subject to the right of first refusal set forth in this Section 4 and such transferee shall, as a condition to such transfer, deliver to the Company a written instrument confirming that such transferee shall be bound by all of the terms and conditions of this Section 4.

(d) Consequences of Non-Delivery. After the time at which the Offered Shares are required to be delivered to the Company for transfer to the Company pursuant to subsection (b) above, the Company shall not pay any dividend to the Participant on account of such Offered Shares or permit the Participant to exercise any of the privileges or rights of a stockholder with respect to such Offered Shares, but shall, insofar as permitted by law, treat the Company as the owner of such Offered Shares.

(e) Exempt Transactions. The following transactions shall be exempt from the provisions of this Section 4:

(1) any transfer of Shares to or for the benefit of any spouse, child or grandchild of the Participant, or to a trust for their benefit;

(2) any transfer pursuant to an effective registration statement filed by the Company under the Securities Act of 1933, as amended (the “**Securities Act**”); and

(3) the sale of all or substantially all of the outstanding shares of capital stock of the Company (including pursuant to a merger or consolidation);

provided, however, that in the case of a transfer pursuant to clause (1) above, such Shares shall remain subject to the right of first refusal set forth in this Section 4.

(f) Assignment of Company Right. The Company may assign its rights to purchase Offered Shares in any particular transaction under this Section 4 to one or more persons or entities.

(g) Termination. The provisions of this Section 4 shall terminate upon the earlier of the following events:

(1) the closing of the sale of shares of Common Stock in an underwritten public offering pursuant to an effective registration statement filed by the Company under the Securities Act; or

(2) the sale of all or substantially all of the outstanding shares of capital stock, assets or business of the Company, by merger, consolidation, sale of assets or otherwise (other than a merger or consolidation in which all or substantially all of the individuals and entities who were beneficial owners of the Company’s voting securities immediately prior to such transaction beneficially own, directly or indirectly, more than 75% (determined on an as-converted basis) of the outstanding securities entitled to vote generally in the election of directors of the resulting, surviving or acquiring corporation in such transaction).

(h) No Obligation to Recognize Invalid Transfer. The Company shall not be required (1) to transfer on its books any of the Shares which shall have been sold or transferred in violation of any of the provisions set forth in this Section 4, or (2) to treat as owner of such Shares or to pay dividends to any transferee to whom any such Shares shall have been so sold or transferred.

(i) Legends. The certificate representing Shares shall bear a legend substantially in the following form (in addition to, or in combination with, any legend required by applicable federal and state securities laws and agreements relating to the transfer of the Company securities):

“The shares represented by this certificate are subject to a right of first refusal in favor of the Company, as provided in a certain stock option agreement with the Company.”

5. Agreement in Connection with Initial Public Offering.

The Participant agrees, in connection with the initial underwritten public offering of the Common Stock pursuant to a registration statement under the Securities Act, (i) not to (a) 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 Common Stock or any other securities of the Company or (b) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of shares of Common Stock or other securities of the Company, whether any transaction described in clause (a) or (b) is to be settled by delivery of securities, in cash or otherwise, during the period beginning on the date of the filing of such registration statement with the Securities and Exchange Commission and ending 180 days after the date of the final prospectus relating to the offering (plus up to an additional 34 days to the extent requested by the managing underwriters for such offering in order to address FINRA Rule 2241 or NYSE Rule 472(f)(4) or any similar successor provision), and (ii) to execute any agreement reflecting clause (i) above as may be requested by the Company or the managing underwriters at the time of such offering. The Company may impose stop-transfer instructions with respect to the shares of Common Stock or other securities subject to the foregoing restriction until the end of the “lock-up” period.

6. Withholding.

No Shares will be issued pursuant to the exercise of this option unless and until the Participant pays to the Company, or makes provision satisfactory to the Company for payment of, any federal, state or local withholding taxes required by law to be withheld in respect of this option.

7. Transfer Restrictions.

(a) This option may not be sold, assigned, transferred, pledged or otherwise encumbered by the Participant, either voluntarily or by operation of law, except by will or the laws of descent and distribution, and, during the lifetime of the Participant, this option shall be exercisable only by the Participant.

(b) The Participant agrees that he or she will not transfer any Shares issued pursuant to the exercise of this option unless the transferee, as a condition to such transfer, delivers to the Company a written instrument confirming that such transferee shall be bound by all of the terms and conditions of Section 4 and Section 5; provided that such a written confirmation shall not be required with respect to (1) Section 4 after such provision has terminated in accordance with Section 4(g) or (2) Section 5 after the completion of the lock-up period in connection with the Company’s initial underwritten public offering.

8. Provisions of the Plan.

This option is subject to the provisions of the Plan (including the provisions relating to amendments to the Plan), a copy of which is furnished to the Participant with this option. Participant hereby agrees to execute such further instruments and to take such further action as the Company requests to carry out the purposes and intent of the Plan, including, without limitation, restrictions on the transferability of shares of Common Stock, the right of the Company to repurchase shares of Common Stock, the right of the Company to require that shares of Common Stock be transferred in the event of certain transactions, tag-along rights, bring-along rights, redemption and co-sale rights and voting requirements.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written. The Participant hereby accepts the foregoing option and agrees to the terms and conditions thereof. The Participant hereby acknowledges receipt of a copy of the Company’s 2015 Stock Incentive Plan.

COMPANY:
Evelo Biosciences, Inc.

By: _____
Name: _____
Title: _____

PARTICIPANT:

By: _____
[Name]

Address: [_____]
[_____]

SPOUSAL CONSENT:¹

By: _____
Name: _____

Address: [_____]
[_____]

¹ If the Participant resides in a community property state, it is desirable to have the Participant’s spouse also accept the option. The following are community property states: Arizona, California, Idaho, Louisiana, Nevada, New Mexico, Texas, and Washington. Although Wisconsin is not formally a community property state, it has laws governing the division of marital property similar to community property states and it may be desirable to have a Wisconsin Participant’s spouse accept the option.

EXHIBIT A

NOTICE OF STOCK OPTION EXERCISE

[DATE]¹

Evelo Biosciences, Inc.
One Memorial Drive

Cambridge, MA 02142

Attention: Treasurer

Dear Sir or Madam:

I am the holder of a Nonstatutory Stock Option granted to me under the Evelo Biosciences, Inc. (the “**Company**”) 2015 Stock Incentive Plan on []² for the purchase of []³ shares of Common Stock of the Company at a purchase price of \$[]⁴ per share.

I hereby exercise my option to purchase []⁵ shares of Common Stock (the “**Shares**”), for which I have enclosed []⁶ in the amount of []⁷. Please register my stock certificate as follows:

Name(s): _____⁸

Address: _____

¹ Enter date of exercise.

² Enter the date of grant.

³ Enter the total number of shares of Common Stock for which the option was granted.

⁴ Enter the option exercise price per share of Common Stock.

⁵ Enter the number of shares of Common Stock to be purchased upon exercise of all or part of the option.

⁶ Enter “cash”, “personal check” or if permitted by the option or Plan, “stock certificates No. XXXX and XXXX”.

⁷ Enter the dollar amount (price per share of Common Stock times the number of shares of Common Stock to be purchased), or the number of shares tendered. Fair market value of shares tendered, together with cash or check, must cover the purchase price of the shares issued upon exercise.

⁸ Enter name(s) to appear on stock certificate in one of the following formats: (a) your name only (i.e., John Doe); (b) your name and other name (i.e., John Doe and Jane Doe, Joint Tenants with Right to Survivorship); or for Nonstatutory Stock Options only, (c) a child’s name, with you as custodian (i.e. Jane Doe, Custodian for Tommy Doe). Note: There may be income and/or gift tax consequences for registering shares in a child’s name.

I represent, warrant and covenant as follows:

1. I am purchasing the Shares for my own account for investment only, and not with a view to, or for sale in connection with, any distribution of the Shares in violation of the Securities Act of 1933 (the “**Securities Act**”), or any rule or regulation under the Securities Act.
2. I have had such opportunity as I have deemed adequate to obtain from representatives of the Company such information as is necessary to permit me to evaluate the merits and risks of my investment in the Company.
3. I have sufficient experience in business, financial and investment matters to be able to evaluate the risks involved in the purchase of the Shares and to make an informed investment decision with respect to such purchase.
4. I can afford a complete loss of the value of the Shares and am able to bear the economic risk of holding such Shares for an indefinite period.
5. I understand that (i) the Shares have not been registered under the Securities Act and are “restricted securities” within the meaning of Rule 144 under the Securities Act, (ii) the Shares cannot be sold, transferred or otherwise disposed of unless they are subsequently registered under the Securities Act or an exemption from registration is then available; (iii) in any event, the exemption from registration under Rule 144 will not be available for at least one year and even then will not be available unless a public market then exists for the Common Stock, adequate information concerning the Company is then available to the public, and other terms and conditions of Rule 144 are complied with; and (iv) there is now no registration statement on file with the Securities and Exchange Commission with respect to any stock of the Company and the Company has no obligation or current intention to register the Shares under the Securities Act.

Very truly yours,

[Name]

INCENTIVE STOCK OPTION AGREEMENT
GRANTED UNDER 2015 STOCK INCENTIVE PLAN

1. Grant of Option.

This Incentive Stock Option Agreement (the “**Agreement**”) evidences the grant by Evelo Biosciences, Inc., a Delaware corporation (the “**Company**”), on [], 20 [] (the “**Grant Date**”) to [], an employee of the Company (the “**Participant**”), of an option to purchase, in whole or in part, on the terms provided herein and in the Company’s 2015 Stock Incentive Plan (the “**Plan**”), a total of [] shares (the “**Shares**”) of common stock, \$0.001 par value per share, of the Company (“**Common Stock**”) at \$[] per Share. Unless earlier terminated, this option shall expire at 5:00 p.m., Eastern time, on [], 20 [] [date is ten years minus one day from grant date] (the “**Final Exercise Date**”).

It is intended that the option evidenced by this Agreement shall be an incentive stock option as defined in Section 422 of the Internal Revenue Code of 1986, as amended, and any regulations promulgated thereunder (the “**Code**”). Except as otherwise indicated by the context, the term “**Participant**”, as used in this option, shall be deemed to include any person who acquires the right to exercise this option validly under its terms.

2. Vesting Schedule.

This option will become exercisable (“**vest**”) as to 25% of the original number of Shares on the first anniversary of the Vesting Commencement Date (as defined below) and as to an additional 6.25% of the original number of Shares at the end of each successive quarter following the first anniversary of the Vesting Commencement Date until the fourth anniversary of the Vesting Commencement Date. On the fourth anniversary of the Vesting Commencement Date, this option will be exercisable as to all Shares. For purposes of this Agreement, “**Vesting Commencement Date**” shall mean [].

The right of exercise shall be cumulative so that to the extent the option is not exercised in any period to the maximum extent permissible it shall continue to be exercisable, in whole or in part, with respect to all Shares for which it is vested until the earlier of the Final Exercise Date or the termination of this option under Section 3 hereof or the Plan.

3. Exercise of Option.

(a) Form of Exercise. Each election to exercise this option shall be accompanied by a completed Notice of Stock Option Exercise in the form attached hereto as Exhibit A, signed by the Participant, and received by the Company at its principal office, accompanied by this Agreement, and payment in full in the manner provided in the Plan. The Participant may purchase less than the number of Shares covered hereby, provided that no partial exercise of this option may be for any fractional share or for fewer than ten whole shares.

(b) Continuous Relationship with the Company Required. Except as otherwise provided in this Section 3, this option may not be exercised unless the Participant, at the time he or she exercises this option, is, and has been at all times since the Grant Date, an employee or officer of, or consultant or advisor to, the Company or any parent or subsidiary of the Company as defined in Section 424(e) or (f) of the Code (an “**Eligible Participant**”).

(c) Termination of Relationship with the Company. If the Participant ceases to be an Eligible Participant for any reason, then, except as provided in paragraphs (d) and (e) below, the right to exercise this option shall terminate three months after such cessation (but in no event after the Final Exercise Date), provided that this option shall be exercisable only to the extent that the Participant was entitled to exercise this option on the date of such cessation. Notwithstanding the foregoing, if the Participant, prior to the Final Exercise Date, violates the non-competition or confidentiality provisions of any employment contract, confidentiality and nondisclosure agreement or other agreement between the Participant and the Company, the right to exercise this option shall terminate immediately upon such violation.

(d) Exercise Period Upon Death or Disability. If the Participant dies or becomes disabled (within the meaning of Section 22(e)(3) of the Code) prior to the Final Exercise Date while he or she is an Eligible Participant and the Company has not terminated such relationship for “cause” as specified in paragraph (e) below, this option shall be exercisable, within the period of one year following the date of death or disability of the Participant, by the Participant (or in the case of death by an authorized transferee), provided that this option shall be exercisable only to the extent that this option was exercisable by the Participant on the date of his or her death or disability, and further provided that this option shall not be exercisable after the Final Exercise Date.

(e) Termination for Cause. If, prior to the Final Exercise Date, the Participant’s employment is terminated by the Company for Cause (as defined below), the right to exercise this option shall terminate immediately upon the effective date of such termination of employment. If, prior to the Final Exercise Date, the Participant is given notice by the Company of the termination of his or her employment by the Company for Cause, and the effective date of such employment termination is subsequent to the date of delivery of such notice, the right to exercise this option shall be suspended from the time of the delivery of such notice until the earlier of (i) such time as it is determined or otherwise agreed that the Participant’s employment shall not be terminated for Cause as provided in such notice or (ii) the effective date of such termination of employment (in which case the right to exercise this option shall, pursuant to the preceding sentence, terminate upon the effective date of such termination of employment). If the Participant is party to an employment or severance agreement with the Company that contains a definition of “cause” for termination of employment, “Cause” shall have the meaning ascribed to such term in such agreement. Otherwise, “Cause” shall mean willful misconduct by the Participant or willful failure by the Participant to perform his or her responsibilities to the Company (including, without limitation, breach by the Participant of any provision of any employment, consulting, advisory, nondisclosure, non-competition or other similar agreement between the Participant and the Company), as determined by the Company, which determination shall be conclusive. The Participant’s employment shall be considered to have been terminated for Cause if the Company determines, within 30 days after the Participant’s resignation, that termination for Cause was warranted.

4. Company Right of First Refusal.

(a) Notice of Proposed Transfer. If the Participant proposes to sell, assign, transfer, pledge, hypothecate or otherwise dispose of, by operation of law or otherwise (collectively, “transfer”) any Shares acquired upon exercise of this option, then the Participant shall first give written notice of the proposed transfer (the “**Transfer Notice**”) to the Company. The Transfer Notice shall name the proposed transferee and state the number of such Shares the Participant proposes to transfer (the “**Offered Shares**”), the price per share and all other material terms and conditions of the transfer.

(b) Company Right to Purchase. For 30 days following its receipt of such Transfer Notice, the Company shall have the option to purchase all or part of the Offered Shares at the price and upon the terms set forth in the Transfer Notice. In the event the Company elects to purchase all or part of the Offered Shares, it shall give written notice of such election to the Participant within such 30-day period. Within 10 days after his or her receipt of such notice, the Participant shall tender to the Company at its principal offices the certificate or certificates representing the Offered Shares to be purchased by the Company, duly endorsed in blank by the Participant or with duly endorsed stock powers attached thereto, all in a form suitable for transfer of the Offered Shares to the Company. Promptly following receipt of such certificate or certificates, the Company shall deliver or mail to the Participant a check in payment of the purchase price for such Offered Shares; provided that if the terms of payment set forth in the Transfer Notice were other than cash against delivery, the Company may pay for the Offered Shares on the same terms and conditions as were set forth in the Transfer Notice; and provided further that any delay in making such payment shall not invalidate the Company’s exercise of its option to purchase the Offered Shares.

(c) Shares Not Purchased By Company. If the Company does not elect to acquire all of the Offered Shares, the Participant may, within the 30-day period following the expiration of the option granted to the Company under subsection (b) above, transfer the Offered Shares which the Company has not elected to acquire to the proposed transferee, provided that such transfer shall not be on terms and conditions more favorable to the transferee than those contained in the Transfer Notice. Notwithstanding any of the above, all Offered Shares transferred pursuant to this Section 4 shall remain subject to the right of first refusal set forth in this Section 4 and such transferee shall, as a condition to such transfer, deliver to the Company a written instrument confirming that such transferee shall be bound by all of the terms and conditions of this Section 4.

(d) Consequences of Non-Delivery. After the time at which the Offered Shares are required to be delivered to the Company for transfer to the Company pursuant to subsection (b) above, the Company shall not pay any dividend to the Participant on account of such Offered Shares or permit the Participant to exercise any of the privileges or rights of a stockholder with respect to such Offered Shares, but shall, insofar as permitted by law, treat the Company as the owner of such Offered Shares.

(e) Exempt Transactions. The following transactions shall be exempt from the provisions of this Section 4:

(1) any transfer of Shares to or for the benefit of any spouse, child or grandchild of the Participant, or to a trust for their benefit;

(2) any transfer pursuant to an effective registration statement filed by the Company under the Securities Act of 1933, as amended (the “**Securities Act**”); and

(3) the sale of all or substantially all of the outstanding shares of capital stock of the Company (including pursuant to a merger or consolidation); provided, however, that in the case of a transfer pursuant to clause (1) above, such Shares shall remain subject to the right of first refusal set forth in this Section 4.

(f) Assignment of Company Right. The Company may assign its rights to purchase Offered Shares in any particular transaction under this Section 4 to one or more persons or entities.

(g) Termination. The provisions of this Section 4 shall terminate upon the earlier of the following events:

(1) the closing of the sale of shares of Common Stock in an underwritten public offering pursuant to an effective registration statement filed by the Company under the Securities Act; or

(2) the sale of all or substantially all of the outstanding shares of capital stock, assets or business of the Company, by merger, consolidation, sale of assets or otherwise (other than a merger or consolidation in which all or substantially all of the individuals and entities who were beneficial owners of the Company’s voting securities immediately prior to such transaction beneficially own, directly or indirectly, more than 75% (determined on an as-converted basis) of the outstanding securities entitled to vote generally in the election of directors of the resulting, surviving or acquiring corporation in such transaction).

(h) No Obligation to Recognize Invalid Transfer. The Company shall not be required (1) to transfer on its books any of the Shares which shall have been sold or transferred in violation of any of the provisions set forth in this Section 4, or (2) to treat as owner of such Shares or to pay dividends to any transferee to whom any such Shares shall have been so sold or transferred.

(i) Legends. The certificate representing Shares shall bear a legend substantially in the following form (in addition to, or in combination with, any legend required by applicable federal and state securities laws and agreements relating to the transfer of the Company securities):

“The shares represented by this certificate are subject to a right of first refusal in favor of the Company, as provided in a certain stock option agreement with the Company.”

5. Agreement in Connection with Initial Public Offering.

The Participant agrees, in connection with the initial underwritten public offering of the Common Stock pursuant to a registration statement under the Securities Act, (i) not to (a) 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 Common Stock or any other securities of the Company or (b) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of shares of Common Stock or other securities of the Company, whether any transaction described in clause (a) or (b) is to be settled by delivery of securities, in cash or otherwise, during the period beginning on the date of the filing of such registration statement with the Securities and Exchange Commission and ending 180 days after the date of the final prospectus relating to the offering (plus up to an additional 34 days to the extent requested by the managing underwriters for such offering in order to address FINRA Rule 2241 or NYSE Rule 472(f)(4) or any similar successor provision), and (ii) to execute any agreement reflecting clause (i) above as may be requested by the Company or the managing underwriters at the time of such offering. The Company may impose stop-transfer instructions with respect to the shares of Common Stock or other securities subject to the foregoing restriction until the end of the “lock-up” period.

6. Tax Matters.

(a) Withholding. No Shares will be issued pursuant to the exercise of this option unless and until the Participant pays to the Company, or makes provision satisfactory to the Company for payment of, any federal, state or local withholding taxes required by law to be withheld in respect of this option.

(b) Disqualifying Disposition. If the Participant disposes of Shares acquired upon exercise of this option within two years from the Grant Date or one year after such Shares were acquired pursuant to exercise of this option, the Participant shall notify the Company in writing of such disposition.

7. Transfer Restrictions.

(a) This option may not be sold, assigned, transferred, pledged or otherwise encumbered by the Participant, either voluntarily or by operation of law, except by will or the laws of descent and distribution, and, during the lifetime of the Participant, this option shall be exercisable only by the Participant.

(b) The Participant agrees that he or she will not transfer any Shares issued pursuant to the exercise of this option unless the transferee, as a condition to such transfer, delivers to the Company a written instrument confirming that such transferee shall be bound by all of the terms and conditions of Section 4 and Section 5; provided that such a written confirmation shall not be required with respect to (1) Section 4 after such provision has terminated in accordance with Section 4(g) or (2) Section 5 after the completion of the lock-up period in connection with the Company’s initial underwritten public offering.

8. Provisions of the Plan.

This option is subject to the provisions of the Plan (including the provisions relating to amendments to the Plan), a copy of which is furnished to the Participant with this option. Participant hereby agrees to execute such further instruments and to take such further action as the Company requests to carry out the purposes and intent of the Plan, including, without limitation, restrictions on the transferability of shares of Common Stock, the right of the Company to repurchase shares of Common Stock, the right of the Company to require that shares of Common Stock be transferred in the event of certain transactions, tag-along rights, bring-along rights, redemption and co-sale rights and voting requirements.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written. The Participant hereby accepts the foregoing option and agrees to the terms and conditions thereof. The Participant hereby acknowledges receipt of a copy of the Company’s 2015 Stock Incentive Plan.

COMPANY:
Evelo Biosciences, Inc.

By: _____
Name: _____
Title: _____

PARTICIPANT:

By: _____
[Name]

Address: [_____]
[_____]
[_____]

SPOUSAL CONSENT:¹

By: _____
Name:

Address: [_____]
[_____]
[_____]

¹ If the Participant resides in a community property state, it is desirable to have the Participant’s spouse also accept the option. The following are community property states: Arizona, California, Idaho, Louisiana, Nevada, New Mexico, Texas, and Washington. Although Wisconsin is not formally a community property state, it has laws governing the division of marital property similar to community property states and it may be desirable to have a Wisconsin Participant’s spouse accept the option.

EXHIBIT A

NOTICE OF STOCK OPTION EXERCISE

[DATE]¹

Evelo Biosciences, Inc.
One Memorial Drive, 7th Floor
Cambridge, MA 02142

Attention: Treasurer

Dear Sir or Madam:

I am the holder of an Incentive Stock Option granted to me under the Evelo Biosciences, Inc. (the “**Company**”) 2015 Stock Incentive Plan on
² for the purchase of ³ shares of Common Stock of the Company at a purchase price of \$ ⁴ per share.

I hereby exercise my option to purchase ⁵ shares of Common Stock (the “**Shares**”), for which I have enclosed ⁶ in the amount
of ⁷. Please register my stock certificate as follows:

Name(s): _____⁸

Address: _____

I represent, warrant and covenant as follows:

-
- ¹ Enter date of exercise.
² Enter the date of grant.
³ Enter the total number of shares of Common Stock for which the option was granted.
⁴ Enter the option exercise price per share of Common Stock.
⁵ Enter the number of shares of Common Stock to be purchased upon exercise of all or part of the option.
⁶ Enter “cash”, “personal check” or if permitted by the option or Plan, “stock certificates No. XXXX and XXXX”.
⁷ Enter the dollar amount (price per share of Common Stock times the number of shares of Common Stock to be purchased), or the number of shares tendered. Fair market value of shares tendered, together with cash or check, must cover the purchase price of the shares issued upon exercise.
⁸ Enter name(s) to appear on stock certificate in one of the following formats: (a) your name only (i.e., John Doe); (b) your name and other name (i.e., John Doe and Jane Doe, Joint Tenants with Right to Survivorship); or for Nonstatutory Stock Options only, (c) a child’s name, with you as custodian (i.e. Jane Doe, Custodian for Tommy Doe). Note: There may be income and/or gift tax consequences for registering shares in a child’s name.

1. I am purchasing the Shares for my own account for investment only, and not with a view to, or for sale in connection with, any distribution of the Shares in violation of the Securities Act of 1933 (the “**Securities Act**”), or any rule or regulation under the Securities Act.
2. I have had such opportunity as I have deemed adequate to obtain from representatives of the Company such information as is necessary to permit me to evaluate the merits and risks of my investment in the Company.
3. I have sufficient experience in business, financial and investment matters to be able to evaluate the risks involved in the purchase of the Shares and to make an informed investment decision with respect to such purchase.
4. I can afford a complete loss of the value of the Shares and am able to bear the economic risk of holding such Shares for an indefinite period.
5. I understand that (i) the Shares have not been registered under the Securities Act and are “restricted securities” within the meaning of Rule 144 under the Securities Act, (ii) the Shares cannot be sold, transferred or otherwise disposed of unless they are subsequently registered under the Securities Act or an exemption from registration is then available; (iii) in any event, the exemption from registration under Rule 144 will not be available for at least one year and even then will not be available unless a public market then exists for the Common Stock, adequate information concerning the Company is then available to the public, and other terms and conditions of Rule 144 are complied with; and (iv) there is now no registration statement on file with the Securities and Exchange Commission with respect to any stock of the Company and the Company has no obligation or current intention to register the Shares under the Securities Act.
6. I agree to take such further action and to execute such further instruments as the Company requests relating to the Shares, including, without limitation, to implement restrictions on the transferability of Shares, the right of the Company to repurchase Shares, the right of the Company to require that Shares be transferred in the event of certain transactions, tag-along rights, bring-along rights, redemption and co-sale rights and voting requirements.

Very truly yours,

[Name]

620 MEMORIAL DRIVE
CAMBRIDGE, MASSACHUSETTS

LEASE SUMMARY SHEET

Execution Date: July 14, 2015

Tenant: Evelo Therapeutics, Inc., a Delaware corporation

Tenant's Mailing Address Prior to Occupancy: c/o Flagship Ventures
One Memorial Drive, 7th Floor
Cambridge, MA 02142

Landlord: 620 Memorial Leasehold LLC, a Massachusetts limited liability company

Building: 620 Memorial Drive, Cambridge, Massachusetts. The Building consists of approximately 89,443 rentable square feet. The land on which the Building is located (the "**Land**") is more particularly described in Exhibit 2 attached hereto and made a part hereof (the Land, together with the Building, are hereinafter collectively referred to as the "**Property**").

Premises: Approximately 9,150 rentable square feet of space on the second floor of the Building, as more particularly shown as hatched, highlighted or outlined on the plan attached hereto as Exhibit 1 and made a part hereof (the "**Lease Plan**").

Term Commencement Date: The date on which Landlord delivers the Premises to Tenant with Landlord's Work substantially complete. Targeted delivery date: December 2, 2015.

Rent Commencement Date: The date which is two (2) months after the Term Commencement Date

Expiration Date: The last day of the fifth Rent Year (hereinafter defined)

Extension Terms: Subject to Section 1.2 below, one (1) extension term of three (3) years

Landlord's Contribution: Subject to Section 3.5 below, Seven Hundred Seventy-Seven Thousand Seven Hundred Fifty Dollars (\$777,750)

Permitted Uses: Subject to Legal Requirements, general office, research, development and laboratory use, and other ancillary uses related to the foregoing (all in proportions consistent with the design of the base Building).

<u>Base Rent:</u>	<u>RENT YEAR¹</u>	<u>ANNUAL BASE RENT</u>	<u>MONTHLY RENT</u>
	1	\$532,987.50	\$44,415.63
	2	\$548,977.13	\$45,748.09
	3	\$565,446.44	\$47,120.54
	4	\$582,409.83	\$48,534.15
	5	\$599,882.13	\$49,990.18

Operating Costs and Taxes:

See Sections 5.2 and 5.3

Tenant's Share:

A fraction, the numerator of which is the number of rentable square feet in the Premises and the denominator of which is the number of rentable square feet in the Building. As of the Execution Date, Tenant's Share is 10.23%.

Tenant's Tax Share:

A fraction, the numerator of which is the number of rentable square feet in the Premises and the denominator of which is the number of rentable square feet in the Building recognized by the City of Cambridge as being used for purposes which are not exempt from real estate taxation as of the date on which the assessment is made for the tax year in question. As of the Execution Date, Tenant's Tax Share is 10.23%.

Security Deposit/ Letter of Credit:

Subject to Section 7.1, One Hundred Seventy-Five Thousand Dollars (\$175,000.00)

EXHIBIT 1	LEASE PLAN
EXHIBIT 2	LEGAL DESCRIPTION
EXHIBIT 3	SCHEMATIC PLANS FOR LANDLORD'S WORK
EXHIBIT 4	FORM OF LETTER OF CREDIT
EXHIBIT 5	ALTERATIONS CHECKLIST
EXHIBIT 6	TENANT'S HAZARDOUS MATERIALS
EXHIBIT 7	RULES AND REGULATIONS
EXHIBIT 8	LANDLORD'S SERVICES

¹ For the purposes of this Lease, the first "**Rent Year**" shall be defined as the period commencing as of the Rent Commencement Date and ending on the last day of the twelfth full month after the Rent Commencement Date occurs; provided, however, if the Rent Commencement Date occurs on the first day of a calendar month, then the first Rent Year shall end on the day immediately preceding the first anniversary of the Rent Commencement Date. Thereafter, "Rent Year" shall be defined as any subsequent twelve (12) month period during the term of this Lease.

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THIS INDENTURE OF LEASE (this "**Lease**") is hereby made and entered into on the Execution Date by and between Landlord and Tenant.

This Lease and all of its terms, covenants, representations, warranties, agreements and conditions are in all respects subject and subordinate to that certain Master Lease Agreement dated as of May 15, 2014 by and between MIT 620 Memorial LLC ("**Fee Owner**"), as landlord, and Landlord, as tenant (as it may be amended from time to time, the "**Ground Lease**"), a redacted copy of which has been delivered to Tenant. Tenant acknowledges notice and full knowledge of all of the terms, covenants and conditions of the Ground Lease.

Each reference in this Lease to any of the terms and titles contained in any Exhibit attached to this Lease shall be deemed and construed to incorporate the data stated under that term or title in such Exhibit. All capitalized terms not otherwise defined herein shall have the meanings ascribed to them as set forth in the Lease Summary Sheet which is attached hereto and incorporated herein by reference.

LEASE GRANT; TERM; APPURTENANT RIGHTS; EXCLUSIONS.

Lease Grant. Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, the Premises upon and subject to terms and conditions of this Lease, for a term of years commencing on the Term Commencement Date and, unless earlier terminated or extended pursuant to the terms hereof, ending on the Expiration Date (the "**Initial Term**"; the Initial Term and any duly exercised Extension Terms are hereinafter collectively referred to as the "**Term**").

Extension Terms.

(a) Provided (i) Tenant, an Affiliated Entity (hereinafter defined) and/or a Successor (hereinafter defined) is/are then occupying² one hundred percent (100%) of the Premises; and (ii) there is no Event of Default (1) as of the date of the Extension Notice (hereinafter defined), and (2) at the commencement of the applicable Extension Term (hereinafter defined), Tenant shall have the option to extend the Term for one (1) additional term of three (3) years (the "**Extension Term**"), commencing as of the expiration of the Initial Term. Tenant must exercise such option to extend by giving Landlord written notice (the "**Extension Notice**") on or before the date that is twelve (12) months prior to the expiration of the then-current term of this Lease, *time being of the essence*. Notwithstanding the foregoing, Landlord may nullify Tenant's exercise of its option to extend the Term by written notice to Tenant (the "**Nullification Notice**") if (A) on the date Landlord receives the applicable Extension Notice, there is an event which, with the passage of time and/or the giving of notice, would constitute an Event of Default hereunder and (B) Tenant fails to cure such default within the applicable cure period set forth in Section 20.1 after receipt of the Nullification Notice. Upon the timely giving of such notice, the Term shall be deemed extended upon all of the terms and conditions of this Lease, except that Base Rent during the Extension Term shall be calculated in accordance with this Section 1.2, Landlord shall have no obligation to construct or renovate the Premises and Tenant shall have no further right to extend the Term. If Tenant fails to give timely notice, as aforesaid, Tenant shall have no further right to extend the Term. Notwithstanding the fact that Tenant's proper and timely exercise of such option to extend the Term shall be self executing, the parties shall promptly execute a lease amendment reflecting such Extension Term after Tenant exercises such option. The execution of such lease amendment shall not be deemed to waive any of the conditions to Tenant's exercise of its rights under this Section 1.2.

² For purposes of this Section 1.2, the parties agree that license agreements with respect to the use of desks or benches and/or collaboration agreements entered into by Tenant with respect to up to 50% of the Premises shall not, for purposes of this Section 1.2(a), prevent Tenant from exercising its extension right pursuant to this Section 1.2.

(b) The Base Rent during the Extension Term (the “**Extension Term Base Rent**”) shall be determined in accordance with the process described hereafter. Extension Term Base Rent shall be the greater of (i) Base Rent for the last Rent Year of the Initial Term, or (ii) the fair market rental value of the Premises then demised to Tenant as of the commencement of the Extension Term as determined in accordance with the process described below, for renewals of combination laboratory and office space in the vicinity of the Building of equivalent quality, size, utility and location, with the length of the Extension Term and the credit standing of Tenant to be taken into account. Within thirty (30) days after receipt of the Extension Notice, Landlord shall deliver to Tenant written notice of its determination of the Extension Term Base Rent for the Extension Term. Tenant shall, within thirty (30) days after receipt of such notice, notify Landlord in writing whether Tenant accepts or rejects Landlord’s determination of the Extension Term Base Rent (“**Tenant’s Response Notice**”). If Tenant fails timely to deliver Tenant’s Response Notice, Landlord’s determination of the Extension Term Base Rent shall be binding on Tenant.

(c) If and only if Tenant’s Response Notice is timely delivered to Landlord and indicates both that Tenant rejects Landlord’s determination of the Extension Term Base Rent and desires to submit the matter to arbitration, then the Extension Term Base Rent shall be determined in accordance with the procedure set forth in this Section 1.2(c). In such event, within ten (10) days after receipt by Landlord of Tenant’s Response Notice indicating Tenant’s desire to submit the determination of the Extension Term Base Rent to arbitration, Tenant and Landlord shall each notify the other, in writing, of their respective selections of an appraiser (respectively, “**Landlord’s Appraiser**” and “**Tenant’s Appraiser**”). Landlord’s Appraiser and Tenant’s Appraiser shall then jointly select a third appraiser (the “**Third Appraiser**”) within ten (10) days of their appointment. All of the appraisers selected shall be individuals with at least five (5) consecutive years’ commercial appraisal experience in the area in which the Premises are located, shall be members of the Appraisal Institute (M.A.I.), and, in the case of the Third Appraiser, shall not have acted in any capacity for either Landlord or Tenant within five (5) years of his or her selection. The three appraisers shall determine the Extension Term Base Rent in accordance with the requirements and criteria set forth in Section 1.2(b) above, employing the method commonly known as *Baseball Arbitration*, whereby Landlord’s Appraiser and Tenant’s Appraiser each sets forth its determination of the Extension Term Base Rent as defined above, and the Third Appraiser must select one or the other (it being understood that the Third Appraiser shall be expressly prohibited from selecting a compromise figure). Landlord’s Appraiser and Tenant’s Appraiser shall deliver their determinations of the Extension Term Base Rent to the Third Appraiser within five (5) days of the appointment of the Third Appraiser and the Third Appraiser shall render his or her decision within ten (10) days after receipt of both of the other two determinations of the Extension Term Base Rent. The Third Appraiser’s decision shall be binding on both Landlord and Tenant. Each party shall bear the cost of its own appraiser and shall share equally in the cost of the Third Appraiser.

Notice of Lease. Neither party shall record this Lease, but each of the parties hereto agrees to join in the execution, in recordable form, of a statutory notice of lease and/or written declaration in which shall be stated the Term Commencement Date, the number and length of the Extension Terms and the Expiration Date, which notice of lease may be recorded by Tenant with the Middlesex South Registry of Deeds and/or filed with the Registry District of the Land Court, as appropriate (collectively, the “**Registry**”) at Tenant’s sole cost and expense. If a notice of lease was previously recorded with the Registry, upon the expiration or earlier termination of this Lease, Landlord shall deliver to Tenant a notice of termination of lease and Tenant shall promptly execute and deliver the same to Landlord for Landlord’s execution and recordation with the Registry. Tenant’s obligations under this Section 1.3 shall survive the expiration or earlier termination of the Lease.

Appurtenant Rights.

(d) **Common Areas.** Subject to the terms of this Lease and the Rules and Regulations (hereinafter defined), Tenant shall have, as appurtenant to the Premises, rights to use in common with others entitled thereto, the areas designated from time to time for the common use of Tenant and other tenants of the Property (such areas are hereinafter referred to as the “**Common Areas**”). The Common Areas include: (i) the common lobbies, passenger and freight elevators, loading docks, hallways and stairways of the Building serving the Premises, (ii) common walkways necessary for access to the Building, (iii) if the Premises include less than the entire rentable area of any floor, the common toilets and other common facilities of such floor; and (iv) other areas designated by Landlord from time to time for the common use of Tenant and other tenants of the Building; and no other appurtenant rights or easements

(e) **Parking.** Commencing on the Term Commencement Date and thereafter throughout the Term, Landlord shall, subject to the terms hereof, make available nine (9) parking spaces for Tenant’s use in the parking areas serving the Building (which are, subject to the last sentence of this Section 1.4(b), located in the surface lot in front of the Building). The number of parking spaces in the parking areas reserved for Tenant, as modified pursuant to this Lease or as otherwise permitted by Landlord, are hereinafter referred to as the “**Parking Spaces**.” Tenant shall have no right to hypothecate or encumber the Parking Spaces, and shall not sublet, assign, or otherwise transfer the Parking Spaces other than to employees of Tenant occupying the Premises or to a Successor (hereinafter defined), an Affiliated Entity (hereinafter defined) or a transferee pursuant to an approved Transfer under Section 13 of this Lease. Throughout the Term, Tenant shall pay Landlord (or at Landlord’s direction, directly to the parking operator³) for all of the Parking Spaces at the then-current prevailing rate, as such rate may vary from time to time. As of the Execution Date, the monthly charge for parking is Two Hundred Dollars (\$200) per Parking Space per month. If, for any reason, Tenant shall fail timely to pay the charge for any of said Parking Spaces, and if such default continues for ten (10) days after written notice thereof, Tenant shall have no further right to the Parking Spaces for which Tenant failed to pay the charge under this Section 1.4(b) and Landlord may allocate such Parking Spaces for use by other tenants of the Property free and clear of Tenant’s rights under this Section 1.4(b). Said Parking Spaces will be on an unassigned, non-reserved basis, and shall be subject to such reasonable rules and regulations as may be in effect for the use of the parking areas from time to time (including, without limitation, Landlord’s right, without additional charge to Tenant above the prevailing rate for Parking Spaces, to institute a valet or attendant-managed parking system). Reserved and handicap parking spaces must be honored. Notwithstanding anything to the contrary contained herein, in connection with the exercise of Landlord’s rights pursuant to Section 2.2 below, or in connection with the development or redevelopment of other property owned or controlled by Landlord, Landlord shall have the right to relocate the Parking Spaces from time to time to other property owned or controlled by Landlord or its affiliates, so long as such other property is within 1,000 feet of the Land.

(f) It is acknowledged that Tenant may generate certain hazardous, medical, bio-hazard or other waste (collectively, “**Waste**”) that requires specialty pick-up. If Landlord shall elect, in Landlord’s sole discretion, to make available to tenants of the Building, including Tenant, certain waste storage room(s) located in the Building so designated by Landlord, which room(s) is/are located near the Building’s loading dock, then Landlord shall make a portion of such room(s) available for Tenant’s use, subject to and in accordance with all applicable Legal Requirements (including without limitation Environmental Laws), solely for the storage of Tenant’s Waste awaiting pick-up by Tenant’s Waste removal vendor. Prior to storing any Waste in such room(s), Tenant must notify Landlord in writing of Tenant’s contact person regarding any matters pertaining to such Waste and the types and quantities of the Waste to ensure that adequate ventilation and fire protection is available therefor, it being understood and agreed that if Landlord reasonably determines that there is not adequate ventilation and/or fire

³ e.g., in the event that the Landlord has leased or subleased the parking areas to a third party

protection available (Landlord being under no obligation to provide ventilation and/or fire protection to accommodate the same), Tenant shall not store any Waste in such room(s). Tenant must arrange for pick-up of any of Tenant's Waste within seven (7) days after the date on which the same are first stored in such room(s), *time being of the essence*. Tenant's use of such room(s) shall comply at Tenant's sole cost and expense with all rules and regulations promulgated from time to time by or on behalf of Landlord with respect thereto, including without limitation requirements for secondary containment. Tenant shall indemnify, defend and hold the Landlord Parties harmless from and against any and all Claims arising from Tenant's use of such room(s) by any of the Tenant Parties. Landlord shall have the right to terminate Tenant's right to use such room(s) (i) upon at least thirty (30) days' notice if Landlord terminates the rights of all tenants of the Building to use such room(s), (ii) upon at least thirty (30) days' notice if Landlord desires to lease such room(s) to one or more tenants, (iii) upon at least thirty (30) days' notice if Landlord desires to convert the use of such room to another purpose, or (iv) immediately by notice if any of the Tenant Parties fails to comply with the terms of this Section 1.4(c) or if there is an Event of Default.

Tenant's Access.

(g) From and after the Term Commencement Date and until the end of the Term, Tenant shall have access to the Premises twenty-four (24) hours a day, seven (7) days a week, subject to Legal Requirements, the Rules and Regulations, the terms of this Lease, Landlord's Force Majeure (hereinafter defined) and matters of record.

(h) Tenant shall have the right to access the Premises, at Tenant's sole risk, during the period commencing upon substantial completion of Landlord's Work and ending on the day immediately prior to the Term Commencement Date, for the purpose of installing wiring, cabling, furniture, fixtures and equipment only. Tenant shall, prior to the first entry to the Premises pursuant to this Section 1.5(b), provide Landlord with certificates of insurance evidencing that the insurance required in Section 14 hereof is in full force and effect and covering any person or entity entering the Building. Tenant shall defend, indemnify and hold the Landlord Parties (hereinafter defined) harmless from and against any and all Claims (hereinafter defined) for injury to persons or property resulting from or relating to Tenant's access to and use of the Premises prior to the Term Commencement Date as provided under this Section 1.5(b). Tenant shall coordinate any access to the Premises prior to the Term Commencement Date with Landlord's property manager.

Exclusions. The following are expressly excluded from the Premises and reserved to Landlord: all the perimeter walls of the Premises (except the inner surfaces thereof), the Common Areas, and any space in or adjacent to the Premises used for shafts, stacks, pipes, conduits, wires and appurtenant fixtures, fan rooms, ducts, electric or other utilities, sinks or other Building facilities, and the use of all of the foregoing, except as expressly permitted pursuant to Sections 1.4(a) and 1.4(c) above.

RIGHTS RESERVED TO LANDLORD.

Additions and Alterations. Landlord reserves the right, at any time and from time to time, to make such changes, alterations, additions, improvements, repairs or replacements in or to the Property (including the Premises but, with respect to the Premises, only for purposes of repairs, maintenance, replacements and other rights expressly reserved to Landlord herein) and the fixtures and equipment therein, as well as in or to the street entrances and/or the Common Areas, as it may deem necessary or desirable, provided, however, that there be no material obstruction of access to, or material interference with the use and enjoyment of, the Premises by Tenant. Subject to the foregoing, Landlord expressly reserves the right to temporarily close all, or any portion, of the Common Areas for the purpose of making repairs or changes thereto.

Additions to the Property. Landlord may at any time or from time to time construct additional improvements in all or any part of the Property, including, without limitation, adding additional buildings or changing the location or arrangement of any improvement in or on the Property or all or any part of the Common Areas, or add or deduct any land to or from the Property; provided that there shall be no material increase in Tenant's obligations or material interference with Tenant's rights under this Lease in connection with the exercise of the foregoing reserved rights.

Name and Address of Building. Landlord reserves the right at any time and from time to time to change the name or address of the Building and/or the Property, provided Landlord gives Tenant at least three (3) months' prior written notice thereof.

Landlord's Access. Subject to the terms hereof, Tenant shall (a) upon as much advance notice as is practical under the circumstances, and in any event at least twenty-four (24) hours' prior written notice (except that no notice shall be required in emergency situations), permit Landlord and any holder of a Mortgage (hereinafter defined) (each such holder, a "**Mortgagee**"), and their agents, employees and contractors, to have free and unrestricted access to and to enter upon the Premises at all reasonable hours for the purposes of inspection, making repairs, replacements or improvements in or to the Premises or the Building or equipment therein (including, without limitation, sanitary, electrical, heating, air conditioning or other systems), complying with all applicable laws, ordinances, rules, regulations, statutes, by-laws, court decisions and orders and requirements of all public authorities (collectively, "**Legal Requirements**"), or exercising any right reserved to Landlord under this Lease (including without limitation the right to take upon or through, or to keep and store within the Premises all necessary materials, tools and equipment); (b) permit Landlord and its agents and employees, at reasonable times, upon reasonable advance notice, to show the Premises during normal business hours (i.e. Monday – Friday 8 A.M.—6 P.M., Saturday 8 A.M. – 1 P.M., excluding holidays) to any prospective Mortgagee or purchaser of the Building and/or the Property or of the interest of Landlord therein, and, during the last nine (9) months of the Term, prospective tenants; (c) upon reasonable prior written notice from Landlord, permit Landlord and its agents, at Landlord's sole cost and expense, to perform environmental audits, environmental site investigations and environmental site assessments ("**Site Assessments**") in, on, under and at the Premises and the Land, it being understood that Landlord shall repair any damage arising as a result of the Site Assessments, and such Site Assessments may include both above and below the ground testing and such other tests as may be necessary or appropriate to conduct the Site Assessments; and (d) in case any excavation shall be made for building or improvements or for any other purpose upon the land adjacent to or near the Premises, afford without charge to Landlord, or the person or persons, firms or corporations causing or making such excavation, license to enter upon the Premises for the purpose of doing such work as Landlord or such person or persons, firms or corporation shall deem to be necessary to preserve the walls or structures of the Building from injury, and to protect the Building by proper securing of foundations. The parties agree and acknowledge that, despite reasonable and customary precautions (which Landlord agrees it shall exercise), any property or equipment in the Premises of a delicate, fragile or vulnerable nature may nevertheless be damaged in the course of cleaning and maintenance services being performed. Accordingly, Tenant shall take reasonable protective precautions with unusually fragile, vulnerable or sensitive property and equipment. Tenant may identify certain areas of the Premises that require limited access and strict security measures ("**Security Areas**") by written notice to Landlord from time to time. Except in the event of an emergency threatening personal injury, damage to property or a violation of any Legal Requirement (a "**Secure Area Emergency**"), and except as otherwise approved by Tenant, any entry in the Secure Areas must be done in the presence of a representative of Tenant so long as Tenant makes such representative available upon at least one (1) business day's advance notice. Notwithstanding foregoing, in the event of a Secure Area Emergency, Landlord may enter any part of the Premises without prior notice or a representative of Tenant; provided that Landlord provides Tenant with notice of such entry as soon as reasonably possible thereafter and Landlord takes reasonable precautions to protect the health and safety of its entrants.

Nothing in this paragraph will be construed as permitting Tenant to prohibit such access to any portion of the Premises. Except in Secure Area Emergency situations, anyone who has access to a Secure Area may, at Tenant's election, be subject to Tenant's reasonable security measures and protocols, which may include limiting access to normal business hours and requiring the wearing of an ID badge.

Pipes, Ducts and Conduits. Tenant shall permit Landlord to erect, use, maintain and relocate pipes, ducts and conduits in and through the Premises, provided the same do not materially reduce the floor area or materially adversely affect the appearance thereof.

Minimize Interference. Subject to the provisions of this Lease, Tenant agrees to cooperate with Landlord as reasonably necessary in connection with the exercise of Landlord's rights under this Section 2. Tenant further agrees that dust, noise, vibration, temporary closures of Common Areas, or other inconvenience or annoyance resulting from the exercise of Landlord's rights under Section 2.1 and 2.2 shall not be deemed to be a breach of Landlord's obligations under the Lease, so long as Landlord shall, except in the event of an emergency, use reasonable efforts, consistent with accepted construction practice when applicable, to avoid unreasonably interfering with the conduct of Tenant's business and Tenant's use and occupancy of the Premises. Notwithstanding the foregoing, in no event shall any of the space leased by Tenant at the Property under this Lease be deprived of safe and reasonable access or rendered untenable for the Permitted Uses by reason of Landlord's exercise of its rights under this Section 2.

CONDITION OF PREMISES; CONSTRUCTION.

Condition of Premises. On the Term Commencement Date, the Premises shall be broom-clean, and the Building structure and the Building systems serving the Premises and Common Areas shall be in good working order, condition and repair. Subject to the foregoing, and subject further to Landlord's obligation to perform Landlord's Work (hereinafter defined), Tenant acknowledges and agrees that Tenant is leasing the Premises in their "**AS IS**," "**WHERE IS**" condition and with all faults on the Execution Date, without representations or warranties, express or implied, in fact or by law, of any kind, and without recourse to Landlord.

Landlord's Work.

(i) Subject to delays due to governmental regulation, unusual scarcity of or inability to obtain labor or materials, labor difficulties, casualty or other causes reasonably beyond Landlord's control (collectively "**Landlord's Force Majeure**") and subject to any act or omission by Tenant and/or Tenant's agents, servants, employees, consultants, contractors, subcontractors, licensees and/or subtenants (collectively with Tenant, the "**Tenant Parties**") which causes an actual delay in the performance of Landlord's Work (a "**Tenant Delay**"), Landlord, at Landlord's sole cost and expense, shall perform the work ("**Landlord's Work**") more particularly shown in the permit set prepared by Landlord's architect, which permit set shall be based on the schematic plans attached hereto as Exhibit 3 and made a part hereof (the "**Schematics**") and which permit set shall take into account Tenant's input, if any, at weekly design meetings (as such permit set may be amended or modified pursuant to Section 3.2(b) below, the "**Permit Set**"). Landlord's Work shall be deemed "**substantially complete**" on the date that all of Landlord's Work has been completed, except for Punchlist Items, as certified in writing by Landlord's architect.

(j) Tenant shall have the right, in accordance herewith, to submit for Landlord's approval (which approval shall not be unreasonably withheld) change proposals to amend or modify the Permit Set (each, a "**Change Proposal**"). Landlord agrees to respond to any such Change Proposal within five (5) business days after the submission thereof by Tenant (unless Landlord has previously advised Tenant that a longer time period for such response is reasonably necessary due to the nature and scope of

the Change Proposal, together with Landlord's good faith estimate as to the amount of additional time that will be necessary, or the fact that the information provided by Tenant in the Change Proposal is insufficient for the purposes of enabling Landlord to make the determination set forth herein), and if approved by Landlord, advising Tenant of any anticipated increase or decrease in costs associated with such Change Proposal ("**Anticipated Costs**"), as well as an estimate of any delay or time savings which would likely result in the completion of Landlord's Work if a Change Proposal is made pursuant thereto ("**Landlord's Change Order Response**"). If Landlord does not approve any Change Proposal, Landlord shall provide Tenant with a reasonably detailed explanation thereof in writing. Tenant shall have the right to then approve or withdraw such Change Proposal within five (5) business days after receipt of Landlord's Change Order Response. If Tenant fails to respond to Landlord's Change Order Response within such five (5) business day period, such Change Proposal shall be deemed withdrawn. If Tenant approves Landlord's Change Order Response, then (a) such Change Proposal shall be deemed a "Change Order" hereunder, and (b) Landlord shall perform the work described in the Change Order as part of Landlord's Work on all the terms and conditions applicable to Landlord's Work except as expressly set forth herein with respect to Tenant's payment obligation. Any actual delay in the substantial completion of Landlord's Work resulting from Change Proposals (whether approved or not) shall constitute a Tenant Delay.

(k) **Permitting.** Landlord shall obtain all permits for construction of Landlord's Work. The cost of all permits for construction of Landlord's Work (and the cost of obtaining the same) shall be included in the Work Costs (hereinafter defined). Tenant shall cooperate with Landlord in executing permit applications and performing other ministerial acts reasonably necessary to enable Landlord to obtain any such permit or certificate of occupancy.

Punchlist Items. Promptly following delivery of the Premises to Tenant with Landlord's Work substantially complete, Landlord shall provide Tenant with a list prepared by Landlord's architect (the "**Punchlist**") of outstanding items (the "**Punchlist Items**") which (a) need to be performed to complete Landlord's Work, (b) do not impair Tenant's ability to obtain a certificate of occupancy for the Premises and (c) do not materially impair Tenant's ability to use the Premises for the Permitted Use. Subject to Landlord's Force Majeure and Tenant Delays, Landlord shall, unless otherwise specified on the Punchlist, complete all Punchlist Items within sixty (60) days of the date of the Punchlist.

1.2 Remedies. Subject to Landlord's Force Majeure and Tenant Delays, if the Term Commencement Date has not occurred on or before (a) January 4, 2016, then the Rent Commencement Date shall be delayed one day for each day after such date that the Term Commencement Date does not occur⁴, and (b) March 2, 2016, then Tenant shall be entitled to terminate this Lease by thirty (30) days' prior written notice to Landlord (provided that such notice shall be of no force and effect if the Term Commencement Date occurs within such 30 day period). The remedies set forth in this Section 3.4 are Tenant's sole and exclusive rights and remedies if the Term Commencement Date does not occur on or before December 2, 2015.

1.3 Cost of Landlord's Work.

(a) **Landlord's Contribution.** As an inducement to Tenant's entering into this Lease, Landlord shall pay for up to Seven Hundred Seventy-Seven Thousand Seven Hundred Fifty Dollars (\$777,750) ("**Landlord's Contribution**") of the costs incurred in connection with the performance of Landlord's Work other than the following costs (collectively, "**Excluded Construction Costs**"), which

⁴ For illustration purposes only, if the Term Commencement Date occurs on January 8, 2016, then the Rent Commencement Date shall be delayed 4 days and shall occur on March 12, 2016 (which is 2 months and 4 days after the Term Commencement Date)

shall be paid for by Tenant within thirty (30) days of demand from time to time (but in no event more often than monthly): (i) the cost of acquiring or installing any of Tenant's Property (hereinafter defined), including without limitation telecommunications and computer equipment and all associated wiring and cabling, any de-mountable decorations, artwork and partitions, signs, and trade fixtures, or (ii) the cost of any fixtures or Alterations that will be removed at the end of the Term, or (iii) more than Seventy-Seven Thousand Seven Hundred Seventy-Five Dollars (\$77,775) of any so-called "soft costs" (which "soft costs" shall include, without limitation, architectural, engineering and consultant fees and design and permitting costs). Landlord shall not charge any supervisory or management fees with respect to Landlord's Work, provided that the costs of any third party construction/project manager(s) engaged by Landlord shall be included in the cost of the Landlord's Work. Landlord and Tenant agree that Consigli Construction Co., Inc. (or such other general contractor of comparable or greater experience and reputation selected by Landlord) shall be the general contractor for the performance of Landlord's Work.

(b) Responsibility for Costs.

(i) For purposes hereof, "**Work Costs**" means (A) all costs incurred in connection with Landlord's Work, including without limitation the costs of designing, permitting and performing Landlord's Work, as affected by any Change Orders and any changes made in accordance with Section 3.5(b) (ii) below and the costs of any third party construction/project manager(s) engaged by Landlord, less (B) the Excluded Construction Costs.

(ii) Landlord shall provide Tenant with a detailed cost estimate based on the original Permit Set (the "**Cost Estimate**"). The Cost Estimate shall include a line item for the cost of any third party construction/project manager(s). Tenant shall have a period of three (3) business days after receipt of the Cost Estimate, *time being of the essence*, to notify Landlord whether Tenant approves such Cost Estimate, or that Tenant wishes to conduct value engineering in order to reduce the cost of Landlord's Work. If Tenant does not timely provide such notice, Tenant shall be deemed to have (A) approved such Cost Estimate, and (B) elected not to conduct such value engineering. If Tenant elects to conduct value engineering, then (i) any delays to substantial completion of Landlord's Work arising from such value engineering shall be deemed to be Tenant Delays, and (ii) until mutually approved (or deemed approved), Landlord and Tenant shall confer and negotiate reasonably and in good faith to reach agreement on the Cost Estimate and the Permit Set on which the Cost Estimate is based. The Cost Estimate approved (or deemed approved) by Tenant is herein referred to as the "**Final Cost Estimate**."

(iii) If the Final Cost Estimate discloses that the Work Costs exceed Landlord's Contribution (such excess, the "**Excess Costs**"), Tenant shall pay, within thirty (30) days after demand from time to time (but in no event more than monthly), Tenant's Proportion (hereinafter defined) of the Work Costs reflected on each requisition from Landlord, to which shall be attached invoices and/or other documentation supporting the requisition. "**Tenant's Proportion**" shall be a fraction, the numerator of which is the estimated Excess Costs, and the denominator of which is the estimated Work Costs. After final completion of Landlord's Work, Landlord shall prepare and submit to Tenant a final reconciliation in sufficient detail to reasonably determine actual Work Costs (including without limitation all Punchlist Items) (the "**Final Reconciliation**"). Landlord shall use reasonable efforts to deliver the Final Reconciliation to Tenant within ninety (90) days after final completion of Landlord's Work. Within thirty (30) days after delivery of the Final Reconciliation, Tenant shall pay to Landlord any remaining Excess Costs.

USE OF PREMISES.

Permitted Uses. During the Term, Tenant shall use the Premises only for the Permitted Uses and for no other purposes. Service and utility areas (whether or not a part of the Premises) shall be used only for the particular purpose for which they are designed. All corridor doors, when not in use, shall be kept closed.

Prohibited Uses.

(c) Notwithstanding any other provision of this Lease, Tenant shall not use the Premises or the Building, or any part thereof, or suffer or permit the use or occupancy of the Premises or the Building or any part thereof by any of the Tenant Parties (i) in a manner which would violate any of the covenants, agreements, terms, provisions and conditions of this Lease or otherwise applicable to or binding upon the Premises; (ii) for any unlawful purposes or in any unlawful manner; (iii) which, in the reasonable judgment of Landlord (taking into account the use of the Building as a combination laboratory, research and development and office building and the Permitted Uses) shall (a) impair the appearance or reputation of the Building; (b) impair, interfere with or otherwise diminish the quality of any of the Building services or the proper and economic heating, cleaning, ventilating, air conditioning or other servicing of the Building or Premises, or the use or occupancy of any of the Common Areas; (c) occasion discomfort, inconvenience or annoyance in any material respect (and Tenant shall not install or use any electrical or other equipment of any kind which, in the reasonable judgment of Landlord, will cause any such impairment, interference, discomfort, inconvenience, annoyance or injury), or cause any injury or damage to any occupants of the Premises or other tenants or occupants of the Building or their property; or (d) cause harmful air emissions, laboratory odors or noises or any unusual or other objectionable odors, noises or emissions to emanate from the Premises; (iv) in a manner which is inconsistent with the operation and/or maintenance of the Building as a first-class combination office, research, development and laboratory facility; or (v) for any fermentation processes whatsoever; (vi) in a manner which shall increase such insurance rates on the Building or on property located therein over that applicable when Tenant first took occupancy of the Premises hereunder.

(d) With respect to the use and occupancy of the Premises and the Common Areas, Tenant will not: (i) place or maintain any signage, trash, refuse or other articles in any vestibule or entry of the Premises, on the footwalks or corridors adjacent thereto or elsewhere on the exterior of the Premises, nor obstruct any driveway, corridor, footwalk, parking area, mall or any other Common Areas; (ii) permit undue accumulations of or burn garbage, trash, rubbish or other refuse within or without the Premises; (iii) permit the parking of vehicles so as to interfere with the use of any driveway, corridor, footwalk, parking area, or other Common Areas; (iv) receive or ship articles of any kind outside of those areas reasonably designated by Landlord; (v) conduct or permit to be conducted any auction, going out of business sale, bankruptcy sale (unless directed by court order), or other similar type sale in or connected with the Premises; (vi) use the name of the Building, the Property, Landlord, or any of Landlord's affiliates or subsidiaries or any photograph, film, drawing, or other depiction or representation of the Building and/or the Property or any part thereof, which contains signage or distinctive architectural characteristics that cause the scene photographed, filmed, drawn, depicted, or represented to be identifiable as being the Building and/or the Property, in any publicity, promotion, trailer, press release, advertising, printed, or display materials without Landlord's prior written consent; or (vii) except in connection with Alterations (hereinafter defined) approved by Landlord, cause or permit any hole to be drilled or made in any part of the Building.

RENT; ADDITIONAL RENT.

Base Rent. During the Term, Tenant shall pay to Landlord Base Rent in equal monthly installments, in advance and without demand on the first day of each month for and with respect to such month, except that, if the Rent Commencement Date is any day other than the first day of a calendar month, Base Rent due for the period between the Rent Commencement Date and the last day of the calendar month in which the Rent Commencement Date occurs shall be due on the Rent Commencement

Date. The payment of Base Rent and additional rent and other charges reserved and covenanted to be paid under this Lease with respect to the Premises (collectively, "**Rent**") shall commence on the Rent Commencement Date, and shall be prorated for any partial months. Rent shall be payable to Landlord or, if Landlord shall so direct in writing, to Landlord's agent or nominee, in lawful money of the United States which shall be legal tender for payment of all debts and dues, public and private, at the time of payment.

Operating Costs.

(e) "**Operating Costs**" shall mean all costs incurred and expenditures of whatever nature made by Landlord in the operation and management of the Building or allocated to the Building, including without limitation any costs for utilities supplied to the Common Areas, the costs of maintaining the MWRA permit(s) for the Building, and any costs for repair and replacements, cleaning and maintenance of the Common Areas, related equipment, facilities and appurtenances and HVAC equipment, a management fee paid to Landlord's property manager, the costs of Landlord's management office for the Property, the cost of operating any amenities in the Property available to all tenants of the Property and any subsidy provided by Landlord for or with respect to any such amenity. For costs and expenditures made by Landlord in connection with the operation, management, repair, replacement, maintenance and insurance of the Building as a whole, Landlord shall make a reasonable allocation thereof between the retail and non-retail portions of the Building, if applicable. To the extent that a cost included in Operating Costs is also allocable to property other than the Property, such cost shall be equitably allocated to each parcel of property which benefits from such cost. Operating Costs shall not include Excluded Costs (hereinafter defined). Landlord shall have the right but not the obligation, from time to time, to equitably allocate some or all of the Operating Costs among different tenants of the Building (for example, and without limiting the generality of the foregoing, based in whole or in part on shared or similar use of particular systems or equipment).

(f) "**Excluded Costs**" shall be defined as (i) any mortgage charges (including interest, principal, points and fees); (ii) brokerage commissions; (iii) salaries of executives and owners not directly employed in the management/operation of the Property; (iv) the cost of work done by Landlord for a particular tenant; (v) subject to Subsection 5.2(h) below, capital expenditures; (vi) the costs of Landlord's Work and any contributions made by Landlord to any tenant of the Property in connection with the build-out of its premises; (vii) franchise or income taxes imposed on Landlord or Taxes; (viii) costs paid directly by individual tenants to suppliers, including tenant electricity, telephone and other utility costs; (ix) increases in premiums for insurance when such increase is caused by the use of the Building by Landlord or any other tenant of the Building; (x) maintenance and repair of capital items not a part of the Building or the Property; (xi) depreciation of the Building; (xii) costs relating to maintaining Landlord's existence as a corporation, partnership or other entity; (xiii) advertising and other fees and costs incurred in procuring tenants; (xiv) the cost of any items for which Landlord is reimbursed by insurance, condemnation awards, refund, rebate or otherwise, and any expenses for repairs or maintenance to the extent covered by warranties, guaranties and service contracts; (xv) costs incurred in connection with any disputes between Landlord and its employees, between Landlord and Building management, or between Landlord and other tenants or occupants; (xvi) the cost of testing, remediation or removal, transportation or storage of Hazardous Materials (hereinafter defined) in the Building or on the Property required by Environmental Laws (hereinafter defined), provided however, that with respect to the testing, remediation or removal of (i) any material or substance located in the Building on the Execution Date and which, as of the Execution Date, is not considered, as a matter of law, to be a Hazardous Material, but which is subsequently determined to be a Hazardous Material as a matter of law, and (ii) any material or substance located in the Building after the Execution Date and which, when placed in the Building, was not considered, as a matter of law, to be a Hazardous Material, but which is subsequently determined to be a Hazardous Material as a matter of law, the costs thereof may be included in Operating Costs; (xvii) capital expenditures not expressly permitted under Section 5.2(h) below; and (xviii) amounts paid by Landlord to or at the direction of Fee Owner pursuant to the Ground Lease.

(g) “**Capital Interest Rate**” shall be defined as an annual rate of either one percentage point over the AA Bond rate (Standard & Poor’s corporate composite or, if unavailable, its equivalent) as reported in the financial press at the time the capital expenditure is made or, if the capital item is acquired through third party financing, then the actual (including fluctuating) rate paid by Landlord in financing the acquisition of such capital item.

(h) “**Annual Charge Off**” shall be defined as the annual amount of principal and interest payments which would be required to repay a loan (“**Capital Loan**”) in equal monthly installments over the Useful Life (hereinafter defined), of the capital item in question on a direct reduction basis at an annual interest rate equal to the Capital Interest Rate, where the initial principal balance is the cost of the capital item in question.

(i) “**Useful Life**” shall be reasonably determined by Landlord in accordance with sound accounting principles and practices consistently applied. Notwithstanding the foregoing, if Landlord reasonably concludes on the basis of engineering estimates that a particular capital expenditure will effect savings in Operating Costs including, without limitation, energy related costs, and that such annual projected savings will exceed the Annual Charge Off of Capital Expenditures computed as aforesaid, then and in such event, the Annual Charge Off shall be determined based upon a Useful Life which would cause the principal and interest payments in a full repayment of the Capital Loan in question to equal the amount of projected savings of such Useful Life.

(j) Payment of Operating Costs. Tenant shall pay to Landlord, as additional rent, Tenant’s Share of Operating Costs. Landlord may make a good faith estimate of Tenant’s Share of Operating Costs for any fiscal year or part thereof during the Term, and Tenant shall pay to Landlord, on the Term Commencement Date and on the first (1st) day of each calendar month thereafter, an amount equal to Tenant’s Share of Operating Costs for such fiscal year and/or part thereof divided by the number of months therein. Landlord may estimate and re-estimate Tenant’s Share of Operating Costs and deliver a copy of the estimate or re-estimate to Tenant. Thereafter, the monthly installments of Tenant’s Share of Operating Costs shall be appropriately adjusted in accordance with the estimations so that, by the end of the fiscal year in question, Tenant shall have paid all of Tenant’s Share of Operating Costs as estimated by Landlord. Any amounts paid based on such an estimate shall be subject to adjustment as herein provided when actual Operating Costs are available for each fiscal year.

(k) Annual Reconciliation. Landlord shall, within one hundred twenty (120) days after the end of each fiscal year, deliver to Tenant a reasonably detailed statement of the actual amount of Operating Costs for such fiscal year (“**Year End Statement**”). Failure of Landlord to provide the Year End Statement within the time prescribed shall not relieve Tenant from its obligations hereunder. If the total of such monthly remittances on account of any fiscal year is greater than Tenant’s Share of Operating Costs actually incurred for such fiscal year, then, provided no Event of Default has occurred nor any event which, with the passage of time and/or the giving of notice would constitute an Event of Default, Tenant may credit the difference against the next installment of additional rent on account of Operating Costs due hereunder, except that if such difference is determined after the end of the Term, Landlord shall refund such difference to Tenant within thirty (30) days after such determination to the extent that such difference exceeds any amounts then due from Tenant to Landlord (it being understood and agreed that if Tenant cures any default prior to the expiration of the notice and/or cure periods set forth in Section 20.1 below, Tenant shall then be entitled to take such credit). If the total of such remittances is less than Tenant’s Share of Operating Costs actually incurred for such fiscal year, Tenant shall pay the difference to Landlord, as additional rent hereunder, within ten (10) days of Tenant’s receipt

of an invoice therefor. Landlord's estimate of Operating Costs for the next fiscal year shall be based upon the Operating Costs actually incurred for the prior fiscal year as reflected in the Year-End Statement plus a reasonable adjustment based upon estimated increases in Operating Costs. The provisions of this Section 5.2(g) shall survive the expiration or earlier termination of this Lease.

(l) Capital Expenditures. If, during the Term, Landlord shall replace any capital items or make any capital expenditures (collectively, "Capital Expenditures") the total amount of which (net of any warranty claims) is not properly includable in Operating Costs for the fiscal year in which they were made, in accordance with sound accounting principles and practices consistently applied in effect at the time of such replacement, there shall nevertheless be included in such Operating Costs (and in Operating Costs for each succeeding fiscal year) the amount, if any, by which the Annual Charge Off (determined as hereinafter provided) of such Capital Expenditure (less insurance proceeds, if any, collected by Landlord by reason of damage to, or destruction of the capital item being replaced) exceeds the Annual Charge Off of the Capital Expenditure for the item being replaced. If a new capital item is acquired which does not replace another capital item, and such new capital item being acquired is either (i) required by any Legal Requirements enacted after the Execution Date or (ii) reasonably projected to reduce Operating Costs, then there shall be included in Operating Costs for each fiscal year in which and after such capital expenditure is made the Annual Charge Off of such capital expenditure.

(m) Part Years. If the Term Commencement Date or the Expiration Date occurs in the middle of a fiscal year, Tenant shall be liable for only that portion of the Operating Costs with respect to such fiscal year within the Term.

(n) Gross-Up. If, during any fiscal year, less than all of the Building is occupied by tenants or if Landlord was not supplying all tenants with the services being supplied to Tenant hereunder, actual Operating Costs incurred shall be reasonably extrapolated by Landlord on an item-by-item basis to the reasonable Operating Costs that would have been incurred if the Building was fully occupied and such services were being supplied to all tenants, and such extrapolated Operating Costs shall, for all purposes hereof, be deemed to be the Operating Costs for such fiscal year.

(o) Audit Right. Provided there is no Event of Default nor any event which, with the passage of time and/or the giving of notice would constitute an Event of Default, Tenant may, upon at least sixty (60) days' prior written notice, inspect or audit Landlord's records relating to Operating Costs for any periods of time within the previous fiscal year before the audit or inspection. However, no audit or inspection shall extend to periods of time before the Term Commencement Date. If Tenant fails to object to the calculation of Tenant's Share of Operating Costs on the Year-End Statement within sixty (60) days after such statement has been delivered to Tenant and/or fails to complete any such audit or inspection within ninety (90) days after receipt of the Year End Statement, then Tenant shall be deemed to have waived its right to object to the calculation of Tenant's Share of Operating Costs for the year in question and the calculation thereof as set forth on such statement shall be final. Tenant's audit or inspection shall be conducted only at Landlord's offices or the offices of Landlord's property manager during business hours reasonably designated by Landlord. Tenant shall pay the cost of such audit or inspection. Tenant may not conduct an inspection or have an audit performed more than once during any fiscal year. If such inspection or audit reveals that an error was made in the calculation of Tenant's Share of Operating Costs previously charged to Tenant, then, provided no Event of Default has occurred nor an event which, with the passage of time and/or the giving of notice would constitute an Event of Default, Tenant may credit the difference against the next installment of additional rent on account of Operating Costs due hereunder, except that if such difference is determined after the end of the Term, Landlord shall refund such difference to Tenant within thirty (30) days after such determination to the extent that such difference exceeds any amounts then due from Tenant to Landlord. If such inspection or audit reveals an underpayment by Tenant, then Tenant shall pay to Landlord, as additional rent hereunder, any

underpayment of any such costs, as the case may be, within ten (10) days after receipt of an invoice therefor. Tenant shall maintain the results of any such audit or inspection confidential and shall not be permitted to use any third party to perform such audit or inspection, other than an independent firm of certified public accountants (A) reasonably acceptable to Landlord, (B) which is not compensated on a contingency fee basis or in any other manner which is dependent upon the results of such audit or inspection, and (C) which executes Landlord's standard confidentiality agreement whereby it shall agree to maintain the results of such audit or inspection confidential. The provisions of this Section 5.2(k) shall survive the expiration or earlier termination of this Lease.

Taxes.

(p) "**Taxes**" shall mean the real estate taxes and other taxes, levies and assessments imposed upon the Building, and upon any personal property of Landlord used in the operation of the Building, or on Landlord's interest in the Building or such personal property or reasonably allocated thereto; charges, fees and assessments for transit, housing, police, fire or other services or purported benefits to the Building (including without limitation any community preservation assessments); service or user payments in lieu of taxes; and any and all other taxes, levies, betterments, assessments and charges arising from the ownership, leasing, operation, use or occupancy of the Building or based upon rentals derived therefrom, which are or shall be imposed by federal, state, county, municipal or other governmental authorities. Taxes shall not include any inheritance, estate, succession, gift, franchise, rental, income or profit tax, capital stock tax, capital levy or excise, or any income taxes arising out of or related to the ownership and operation of the Building, provided, however, that any of the same and any other tax, excise, fee, levy, charge or assessment, however described, that may in the future be levied or assessed as a substitute for or an addition to, in whole or in part, any tax, levy or assessment which would otherwise constitute Taxes, whether or not now customary or in the contemplation of the parties on the Execution Date of this Lease, shall constitute Taxes, but only to the extent calculated as if the Property were the only real estate owned by Landlord. "Taxes" shall also include reasonable expenses (including without limitation legal and consultant fees) of tax abatement or other proceedings contesting assessments or levies.

(q) "**Tax Period**" shall be any fiscal/tax period in respect of which Taxes are due and payable to the appropriate governmental taxing authority (i.e., as mandated by the governmental taxing authority), any portion of which period occurs during the Term of this Lease.

(r) **Payment of Taxes.** Tenant shall pay to Landlord, as additional rent, Tenant's Tax Share of Taxes. Landlord may make a good faith estimate of the Taxes to be due by Tenant for any Tax Period or part thereof during the Term, and Tenant shall pay to Landlord, on the Term Commencement Date and on the first (1st) day of each calendar month thereafter, an amount equal to Tenant's Tax Share of Taxes for such Tax Period or part thereof divided by the number of months therein. Landlord may estimate and re-estimate Tenant's Tax Share of Taxes and deliver a copy of the estimate or re-estimate to Tenant. Thereafter, the monthly installments of Tenant's Tax Share of Taxes shall be appropriately adjusted in accordance with the estimations so that, by the end of the Tax Period in question, Tenant shall have paid all of Tenant's Tax Share of Taxes as estimated by Landlord. Any amounts paid based on such an estimate shall be subject to adjustment as herein provided when actual Taxes are available for each Tax Period. If the total of such monthly remittances is greater than Tenant's Tax Share of Taxes actually due for such Tax Period, then, provided no Event of Default has occurred nor any event which, with the passage of time and/or the giving of notice would constitute an Event of Default, Tenant may credit the difference against the next installment of additional rent on account of Taxes due hereunder, except that if such difference is determined after the end of the Term, Landlord shall refund such difference to Tenant within thirty (30) days after such determination to the extent that such difference exceeds any amounts then due from Tenant to Landlord (it being understood and agreed that if Tenant cures any default prior to

the expiration of the notice and/or cure periods set forth in Section 20.1 below, Tenant shall then be entitled to take such credit). If the total of such remittances is less than Tenant's Tax Share of Taxes actually due for such Tax Period, Tenant shall pay the difference to Landlord, as additional rent hereunder, within thirty (30) days of Tenant's receipt of an invoice therefor. Landlord's estimate for the next Tax Period shall be based upon actual Taxes for the prior Tax Period plus a reasonable adjustment based upon estimated increases in Taxes. In the event that Payments in Lieu of Taxes ("**PILOT**"), instead of or in addition to Taxes, are separately assessed to certain portions of the Building or the Property including the Premises, Tenant agrees, except as otherwise expressly provided herein to the contrary, to pay to Landlord, as additional rent, the portion of such PILOT attributable to the Premises in the same manner as provided above for the payment of Taxes. The provisions of this Section 5.3(c) shall survive the expiration or earlier termination of this Lease.

(s) Effect of Abatements. Appropriate credit against Taxes or PILOT shall be given for any refund obtained by reason of a reduction in any Taxes by the assessors or the administrative, judicial or other governmental agency responsible therefor after deduction of Landlord's expenditures for reasonable legal fees and for other reasonable expenses incurred in obtaining the Tax or PILOT refund.

(t) Part Years. If the Term Commencement Date or the Expiration Date occurs in the middle of a Tax Period, Tenant shall be liable for only that portion of the Taxes, as the case may be, with respect to such Tax Period within the Term.

Late Payments.

(u) Any payment of Rent due hereunder not paid when due shall bear interest for each month or fraction thereof from the due date until paid in full at the annual rate of twelve percent (12%), or at any applicable lesser maximum legally permissible rate for debts of this nature (the "**Default Rate**"). Acceptance of interest shall not constitute a waiver of Tenant's default with respect to the overdue amount or prevent Landlord from exercising any of the other rights and remedies available to Landlord under this Lease or at law or in equity now or hereafter in effect.

(v) For each Tenant payment check to Landlord that is returned by a bank for any reason, Tenant shall pay a returned check charge equal to the amount as shall be customarily charged by Landlord's bank at the time.

(w) Money paid by Tenant to Landlord shall be applied to Tenant's account in the following order: first, to any unpaid additional rent, including without limitation late charges, returned check charges, legal fees and/or court costs chargeable to Tenant hereunder; and then to unpaid Base Rent.

No Offset; Independent Covenants; Waiver. Rent shall be paid without notice or demand, and without setoff, counterclaim, defense, abatement, suspension, deferment, reduction or deduction, except as expressly provided herein. **TENANT WAIVES ALL RIGHTS (I) TO ANY ABATEMENT, SUSPENSION, DEFERMENT, REDUCTION OR DEDUCTION OF OR FROM RENT, AND (II) TO QUIT, TERMINATE OR SURRENDER THIS LEASE OR THE PREMISES OR ANY PART THEREOF, EXCEPT AS EXPRESSLY PROVIDED HEREIN. TENANT HEREBY ACKNOWLEDGES AND AGREES THAT THE OBLIGATIONS OF TENANT HEREUNDER SHALL BE SEPARATE AND INDEPENDENT COVENANTS AND AGREEMENTS, THAT RENT SHALL CONTINUE TO BE PAYABLE IN ALL EVENTS AND THAT THE OBLIGATIONS OF TENANT HEREUNDER SHALL CONTINUE UNAFFECTED, UNLESS THE REQUIREMENT TO PAY OR PERFORM THE SAME SHALL HAVE BEEN TERMINATED PURSUANT TO AN EXPRESS PROVISION OF THIS LEASE. LANDLORD**

AND TENANT EACH ACKNOWLEDGES AND AGREES THAT THE INDEPENDENT NATURE OF THE OBLIGATIONS OF TENANT HEREUNDER REPRESENTS FAIR, REASONABLE, AND ACCEPTED COMMERCIAL PRACTICE WITH RESPECT TO THE TYPE OF PROPERTY SUBJECT TO THIS LEASE, AND THAT THIS AGREEMENT IS THE PRODUCT OF FREE AND INFORMED NEGOTIATION DURING WHICH BOTH LANDLORD AND TENANT WERE REPRESENTED BY COUNSEL SKILLED IN NEGOTIATING AND DRAFTING COMMERCIAL LEASES IN MASSACHUSETTS, AND THAT THE ACKNOWLEDGEMENTS AND AGREEMENTS CONTAINED HEREIN ARE MADE WITH FULL KNOWLEDGE OF THE HOLDING IN WESSON V. LEONE ENTERPRISES, INC., 437 MASS. 708 (2002). SUCH ACKNOWLEDGEMENTS, AGREEMENTS AND WAIVERS BY TENANT ARE A MATERIAL INDUCEMENT TO LANDLORD ENTERING INTO THIS LEASE.

Survival. Any obligations under this Section 5 which shall not have been paid at the expiration or earlier termination of the Term shall survive such expiration or earlier termination and shall be paid when and as the amount of same shall be determined and be due.

INTENTIONALLY OMITTED.

LETTER OF CREDIT.

Amount.

(x) Contemporaneously with the execution of this Lease, Tenant shall deliver to Landlord either (i) cash in an amount specified in the Lease Summary Sheet (the “**Cash Security Deposit**”), which shall be held by Landlord in accordance with Section 7.5 below, or (ii) an irrevocable letter of credit which shall (a) be in the amount specified in the Lease Summary Sheet and otherwise in the form attached hereto as Exhibit 4; (b) issued by a bank reasonably acceptable to Landlord upon which presentment may be made in Boston, Massachusetts (if Landlord so requires at the time of its approval thereof); and (c) be for a term of one (1) year, subject to extension in accordance with the terms hereof (the “**Letter of Credit**”). The Letter of Credit shall be held by Landlord, without liability for interest, as security for the faithful performance by Tenant of all of the terms, covenants and conditions of this Lease by the Tenant to be kept and performed during the Term. In no event shall the Letter of Credit be deemed to be a prepayment of Rent nor shall it be considered a measure of liquidated damages. Unless the Letter of Credit is automatically renewing, at least thirty (30) days prior to the maturity date of the Letter of Credit (or any replacement Letter of Credit), Tenant shall deliver to Landlord a replacement Letter of Credit which shall have a maturity date no earlier than the next anniversary of the Term Commencement Date or one (1) year from its date of delivery to Landlord, whichever is later.

(y) If no Event of Default has occurred and there is no event which, with the passage of time and/or the giving of notice, would constitute an Event of Default and further provided that there is no material adverse change in Tenant’s net worth at the commencement of such Rent Year as verified by Landlord based upon a certificate from Tenant’s chief financial officer and audited financials, then the Cash Security Deposit or face amount of the Letter of Credit, as applicable, may be reduced by Tenant to (a) \$130,000.00 at the commencement of the second Rent Year, and (b) \$120,000.00 at the commencement of the third Rent Year; it being understood that if and when Tenant cures a default prior to the expiration of the applicable grace period, Tenant shall then be entitled to effect such reduction in accordance with this Section 7.1(b). Landlord shall, at no cost to Landlord, cooperate with Tenant and the issuer of the Letter of Credit, if applicable, in connection with such reduction.

Application of Proceeds of Letter of Credit. Upon an Event of Default, or if any proceeding shall be instituted by or against Tenant pursuant to any of the provisions of any Act of Congress or State law relating to bankruptcy, reorganizations, arrangements, compositions or other relief from creditors (and, in the case of any proceeding instituted against it, if Tenant shall fail to have such proceedings dismissed within thirty (30) days) or if Tenant is adjudged bankrupt or insolvent as a result of any such proceeding, or upon the end of the Term if there remains any uncured default of which Tenant shall have received notice, Landlord at its sole option may draw down all or a part of the Letter of Credit. The balance of any Letter of Credit cash proceeds shall be held in accordance with Section 7.5 below. Should the entire Letter of Credit, or any portion thereof, be drawn down by Landlord, Tenant shall, upon the written demand of Landlord, deliver a replacement Letter of Credit in the amount drawn, and Tenant's failure to do so within ten (10) days after receipt of such written demand shall constitute an additional Event of Default hereunder. The application of all or any part of the cash proceeds of the Letter of Credit to any obligation or default of Tenant under this Lease shall not deprive Landlord of any other rights or remedies Landlord may have nor shall such application by Landlord constitute a waiver by Landlord.

Transfer of Letter of Credit. In the event that Landlord transfers its interest in the Premises, Tenant shall upon notice from and at no cost to Landlord, deliver to Landlord an amendment to the Letter of Credit or a replacement Letter of Credit naming Landlord's successor as the beneficiary thereof. If Tenant fails to deliver such amendment or replacement within ten (10) days after written notice from Landlord, Landlord shall have the right to draw down the entire amount of the Letter of Credit and hold the proceeds thereof in accordance with Section 7.5 below.

Credit of Issuer of Letter of Credit. In event of a material adverse change in the financial position of any bank or institution which has issued the Letter of Credit or any replacement Letter of Credit hereunder, Landlord reserves the right to require that Tenant change the issuing bank or institution to another bank or institution reasonably approved by Landlord. Tenant shall, within ten (10) days after receipt of written notice from Landlord, which notice shall include the basis for Landlord's reasonable belief that there has been a material adverse change in the financial position of the issuer of the Letter of Credit, replace the then-outstanding letter of credit with a like Letter of Credit from another bank or institution approved by Landlord.

Security Deposit. Landlord shall hold the Cash Security Deposit and/or the balance of proceeds remaining after a draw on the Letter of Credit (each hereinafter referred to as the "**Security Deposit**") as security for Tenant's performance of all its Lease obligations. After an Event of Default, or upon the end of the Term if there remains any uncured default of which Tenant shall have received notice, Landlord may apply the Security Deposit, or any part thereof, to Landlord's damages without prejudice to any other Landlord remedy. Should Landlord apply all or any portion of the Security Deposit in accordance with the terms of this Lease, Tenant shall, upon the written demand of Landlord, deliver cash in the amount applied, and Tenant's failure to do so within twenty (20) days after receipt of such written demand shall constitute an additional Event of Default hereunder. Tenant shall have the right to deliver a replacement Letter of Credit in the form and amount required hereunder, and upon receipt of such replacement Letter of Credit, Landlord shall return the Security Deposit to Tenant. Landlord has no obligation to pay interest on the Security Deposit and may co-mingle the Security Deposit with Landlord's funds. If Landlord conveys its interest under this Lease, the Security Deposit, or any part not applied previously, may be turned over to the grantee in which case Tenant shall look solely to the grantee for the proper application and return of the Security Deposit.

Return of Security Deposit or Letter of Credit. Should Tenant comply with all of such terms, covenants and conditions and promptly pay all sums payable by Tenant to Landlord hereunder, the Security Deposit and/or Letter of Credit or the remaining proceeds therefrom, as applicable, shall be returned to Tenant within sixty (60) days after the end of the Term, less any portion thereof which may have been utilized by Landlord to cure any default or applied to any actual damage suffered by Landlord.

intentionally omitted.

UTILITIES, HVAC; WASTE.

Electricity. Commencing on the Term Commencement Date, Tenant shall pay all charges for electricity furnished to the Premises and/or any equipment exclusively serving the same as additional rent as provided hereafter. Such charges shall be based in part on (a) reasonable estimates by Landlord based on percentage of air flow used by Tenant (measured through Landlord's Building energy management system) as to equipment in the Building serving the Building, Tenant and other tenants, to be separately billed by Landlord, (b) metering equipment installed as part of Landlord's Base Building Work, as to other electricity used in the Premises, which Tenant shall pay directly to the supplier, and (c) if applicable, such other metering equipment, if any, approved by Landlord in its reasonable discretion. Landlord shall, at Tenant's sole cost and expense, maintain and keep in good order, condition and repair any such metering equipment. Tenant shall pay the full amount of any charges attributable to such meter on or before the due date therefor either to Landlord or directly to the supplier thereof, at Landlord's election.

Water. Commencing on the Term Commencement Date, Tenant shall pay all water and sewer charges for water furnished to the Premises and/or any equipment exclusively serving the same as additional rent. Such charges shall be reasonably estimated by Landlord based on the percentage of air flow used by Tenant (measured through Landlord's Building energy management system).

Gas. Commencing on the Term Commencement Date, Tenant shall pay all charges for natural gas service furnished to the Premises and/or any equipment exclusively serving the same as additional rent as provided hereafter. Such charges shall be based in part on (a) reasonable estimates by Landlord based on percentage of air flow used by Tenant (measured through Landlord's Building energy management system) as to equipment in the Building serving the Building, Tenant, and other tenants, to be separately billed by Landlord, and (b) metering equipment installed as part of Landlord's Base Building Work, as to natural gas used in the Premises, which Tenant shall pay directly to the supplier, and (c) if applicable, such other metering equipment, if any, approved by Landlord in its reasonable discretion.

HVAC. Consistent with the levels provided by Class A laboratory/office buildings in East Cambridge, Landlord shall provide to the Common Areas and the Premises on a twenty-four (24) hours per day, seven (7) days per week basis (i) heat 365 days/year and (ii) air conditioning during the normal cooling season; provided, however, that Landlord will provide air conditioning at such other times as reasonably requested by Tenant and (iii) general exhaust/ventilation. Excluded from such services are air conditioning requirements for (A) personal computers in excess of an average of one personal computer per person in occupancy of the Premises, or (B) exceptional office machinery. It is expressly acknowledged and agreed that Tenant shall be solely responsible for specialty exhaust, including without limitation exhaust for H2 rooms, radiation hoods and isotope hoods, vivarium, chemical storage rooms which require Class I, Division II classification, if any, and any other special Tenant equipment. Whenever the air conditioning systems are in operation, Tenant agrees to use reasonable efforts to lower and close the blinds or drapes when necessary because of the sun's position, and to cooperate fully with Landlord with regard to, and to abide by all the reasonable regulations and requirements which Landlord may prescribe for the proper functioning and protection of the air conditioning systems.

Other Utilities; Utility Information. Subject to Landlord's reasonable rules and regulations governing the same, Tenant shall obtain and pay, as and when due, for all other utilities and services consumed in and/or furnished to the Premises, together with all taxes, penalties, surcharges and maintenance charges pertaining thereto. Within ten (10) business days after Landlord's request from time to time, Tenant shall provide Landlord with reasonably detailed information regarding tenant's utility usage in the Premises.

Interruption or Curtailment of Utilities. When necessary by reason of accident or emergency, or for repairs, alterations, replacements or improvements which in the reasonable judgment of Landlord are desirable or necessary to be made, Landlord reserves the right, upon as much prior notice to Tenant as is practicable under the circumstances and no less than twenty-four (24) hours' notice except in the event of an emergency, to interrupt, curtail, or stop (i) the furnishing of hot and/or cold water, and (ii) the operation of the plumbing and electric systems. Landlord shall exercise reasonable diligence to eliminate the cause of any such interruption, curtailment, stoppage or suspension, but there shall be no diminution or abatement of Rent or other compensation due from Landlord to Tenant hereunder, nor shall this Lease be affected or any of Tenant's obligations hereunder reduced, and Landlord shall have no responsibility or liability for any such interruption, curtailment, stoppage, or suspension of services or systems.

Telecommunications Providers. Notwithstanding anything to the contrary herein or in this Lease contained, Landlord has no obligation to allow any particular telecommunications service provider to have access to the Building or to Premises other than Verizon and LightTower (collectively, the "**Approved Providers**"). If Landlord permits such access, Landlord may condition such access upon (a) the execution of Landlord's standard telecommunications agreement (which shall include a provision requiring the payment of fair market rent for any space in the Property dedicated, licensed and/or leased to such provider), and (b) the payment to Landlord by Tenant or the service provider of any costs incurred by Landlord in facilitating such access. Subject to the preceding sentence, Landlord's consent to providing access to the Building to any service provider other than the Approved Providers shall not be unreasonably withheld, conditioned or delayed provided such access does not require any street opening permits or approvals (unless otherwise agreed to by the City of Cambridge) or would unreasonably interfere with the use of the Common Areas.

Landlord's Services. Subject to reimbursement pursuant to Section 5.2 above, Landlord shall provide the services described in Exhibit 8 attached hereto and made a part hereof ("**Landlord's Services**").

MAINTENANCE AND REPAIRS.

Maintenance and Repairs by Tenant. Tenant shall keep all and singular the Premises (including, without limitation, doors and door frames and plate glass (provided that Landlord shall have the right to repair plate glass at Tenant's cost)) neat and clean and free of insects, rodents, vermin and other pests and in such good repair, order and condition as the same are in on the Term Commencement Date or in such better condition as the Premises may be put in during the Term, reasonable wear and tear and damage by insured Casualty excepted. Tenant shall be solely responsible, at Tenant's sole cost and expense, for the proper maintenance of all building systems, sanitary, electrical, heating, air conditioning, plumbing, security or other systems and of all equipment and appliances installed and/or operated by Tenant and/or exclusively serving the Premises. Tenant agrees to provide regular maintenance by contract with a reputable qualified service contractor for the heating and air conditioning equipment servicing the Premises. Such maintenance contract and contractor shall be subject to Landlord's reasonable approval. Tenant, at Landlord's request, shall at reasonable intervals provide Landlord with copies of such contracts and maintenance and repair records and/or reports.

Maintenance and Repairs by Landlord. Except as otherwise provided in Section 15, and subject to Tenant's obligations in Section 10.1 above, Landlord shall keep and maintain the roof, Building structure, exterior window frames, structural floor slabs and columns in good repair, order and condition. In addition, Landlord shall operate and maintain the Common Areas in substantially the same manner as other first-class combination office and laboratory facilities in the vicinity of the Building.

Accidents to Sanitary and Other Systems. Tenant shall give to Landlord prompt notice of any fire or accident in the Premises or in the Building and of any damage to, or defective condition in, any part or appurtenance of the Building including, without limitation, sanitary, electrical, ventilation, heating and air conditioning or other systems located in, or passing through, the Premises. Except as otherwise provided in Section 15, and subject to Tenant's obligations in Section 10.1 above, such damage or defective condition shall be remedied by Landlord with reasonable diligence, but, subject to Section 14.5 below, if such damage or defective condition was caused by any of the Tenant Parties, the cost to remedy the same shall be paid by Tenant.

Floor Load—Heavy Equipment. Tenant shall not place a load upon any floor of the Premises exceeding the floor load per square foot of area which such floor was designed to carry and which is allowed by Legal Requirements. Landlord reserves the right to prescribe the weight and position of all safes, heavy machinery, heavy equipment, freight, bulky matter or fixtures (collectively, "**Heavy Equipment**"), which shall be placed so as to distribute the weight. Heavy Equipment shall be placed and maintained by Tenant at Tenant's expense in settings sufficient in Landlord's reasonable judgment to absorb and prevent vibration, noise and annoyance. Tenant shall not move any Heavy Equipment into or out of the Building without giving Landlord prior written notice thereof and observing all of Landlord's Rules and Regulations with respect to the same. If such Heavy Equipment requires special handling, Tenant agrees to employ only persons holding a Master Rigger's License to do said work, and that all work in connection therewith shall comply with Legal Requirements. Any such moving shall be at the sole risk and hazard of Tenant and Tenant will defend, indemnify and save Landlord and Landlord's agents (including without limitation its property manager), contractors and employees (collectively with Landlord, the "**Landlord Parties**") harmless from and against any and all claims, damages, losses, penalties, costs, expenses and fees (including without limitation reasonable legal fees) (collectively, "**Claims**") resulting directly or indirectly from such moving. Proper placement of all Heavy Equipment in the Premises shall be Tenant's responsibility.

ALTERATIONS AND IMPROVEMENTS BY TENANT.

Landlord's Consent Required. Tenant shall not make any alterations, decorations, installations, removals, additions or improvements (collectively, "**Alterations**") in or to the Premises without Landlord's prior written approval of the contractor(s), written plans and specifications, a time schedule therefor and the items listed in Exhibit 5 attached hereto and made a part hereof. Landlord reserves the right to require that Tenant use Landlord's preferred vendor(s) for any Alterations that involve roof penetrations, alarm tie-ins, sprinklers, fire alarm and other life safety equipment. Tenant shall not make any amendments or additions to plans and specifications approved by Landlord without Landlord's prior written consent. Landlord's approval of non-structural Alterations shall not be unreasonably withheld, conditioned or delayed. Notwithstanding the foregoing, Landlord may withhold its consent in its sole discretion (a) to any Alteration to or affecting the lab benches, fume hoods, roof and/or building systems, (b) with respect to matters of aesthetics relating to Alterations to or affecting the exterior of the Building, and (c) to any Alteration affecting the Building structure. Notwithstanding the foregoing, Landlord's consent shall not be required with respect to non-structural Alterations costing less than \$25,000.00 in any one instance and \$75,000 in the aggregate per year, so long as such Alterations do not adversely affect the roof, Building systems or Building exterior (each, a "**Permitted Alteration**"), provided Tenant shall provide Landlord with reasonably detailed written notice thereof and the applicable Exhibit 5 items shall

be provided if reasonably required by Landlord. Tenant shall be responsible for all elements of the design of Tenant's plans (including, without limitation, compliance with Legal Requirements, functionality of design, the structural integrity of the design, the configuration of the Premises and the placement of Tenant's furniture, appliances and equipment), and Landlord's approval of Tenant's plans shall in no event relieve Tenant of the responsibility for such design. Landlord shall have no liability or responsibility for any claim, injury or damage alleged to have been caused by the particular materials (whether building standard or non-building standard), appliances or equipment selected by Tenant in connection with any work performed by or on behalf of Tenant. Except as otherwise expressly set forth herein, all Alterations shall be done at Tenant's sole cost and expense and at such times and in such manner as Landlord may from time to time reasonably designate. If Tenant shall make any Alterations, then Landlord may elect, at the time Landlord approves such Alterations (or, for Permitted Alterations, promptly after Tenant notifies the Landlord of Tenant's intent to make such Permitted Alterations and provides Landlord with the applicable Exhibit 5 items related thereto), to require Tenant at the expiration or sooner termination of the Term to restore the Premises to substantially the same condition as existed immediately prior to the Alterations. Subject to Section 21.1, if Landlord does not so elect, then any such Alteration shall become a part of the Premises upon installation, and shall be surrendered with the Premises at the end of the Term. Tenant shall provide Landlord with reproducible record drawings (in CAD format) of all Alterations within sixty (60) days after completion thereof.

Supervised Work. Landlord and Tenant recognize that to the extent Landlord permits Tenant to perform any Alterations outside the Premises and/or affecting the Building systems, or if required by Legal Requirements, Landlord will need to make arrangements to have supervisory personnel on site. Accordingly, Landlord and Tenant agree as follows: Tenant shall give Landlord at least two (2) business days' prior written notice of any time outside of normal construction hours when Tenant intends to perform portions of Alterations (the "**Supervised Work**"). Tenant shall reimburse Landlord, within thirty (30) days after demand therefor, for the reasonable cost of Landlord's supervisory personnel overseeing the Supervised Work.

Harmonious Relations. Tenant agrees that it will not, either directly or indirectly, use any contractors and/or materials if their use will create any difficulty, whether in the nature of a labor dispute or otherwise, with other contractors and/or labor engaged by Tenant or Landlord or others in the construction, maintenance and/or operation of the Building, the Property or any part thereof. In the event of any such difficulty, upon Landlord's request, Tenant shall cause all contractors, mechanics or laborers causing such difficulty to leave the Property immediately.

Liens. No Alterations shall be undertaken by Tenant until Tenant has made provision for written waiver of liens from all contractors for such Alteration and taken other appropriate protective measures approved and/or required by Landlord. Tenant shall either: (a) demonstrate to Landlord, to Landlord's reasonable satisfaction, that Tenant is able to pay for the cost of such Alteration, or (b) provide to Landlord security, in form and amount reasonably satisfactory to Landlord (such as a letter of credit, escrowed funds, payment, performance and lien bonds or a guaranty), securing Tenant's obligation to pay for the entire cost of such Alteration. Any mechanic's lien filed against the Premises or the Building for work claimed to have been done for, or materials claimed to have been furnished to, Tenant shall be discharged by Tenant within ten (10) days thereafter, at Tenant's expense by filing the bond required by law or otherwise.

General Requirements. Unless Landlord and Tenant otherwise agree in writing, Tenant shall (a) obtain Landlord's written approval of any and all building permit applications relating to Alterations (including without limitation Permitted Alterations) to the Premises prior to submission thereof; (b) procure or cause others to procure on its behalf all necessary permits before undertaking any Alterations in the Premises (and provide copies thereof to Landlord); (c) perform all of such Alterations in a good and

workmanlike manner, employing materials of good quality and in compliance with Landlord's construction rules and regulations, all insurance requirements of this Lease, and Legal Requirements; and (d) defend, indemnify and hold the Landlord Parties harmless from and against any and all Claims occasioned by or growing out of such Alterations. Tenant shall cause contractors employed by Tenant to (i) carry Worker's Compensation Insurance in accordance with statutory requirements, (ii) carry Automobile Liability Insurance and Commercial General Liability Insurance (A) naming Landlord as an additional insured, and (B) covering such contractors on or about the Premises in the amounts stated in Section 14 hereof or in such other reasonable amounts as Landlord shall require, and (iii) submit binders evidencing such coverage to Landlord prior to the commencement of any such Alterations. In addition, if construction during normal business hours unreasonably disturbs other tenants of the Property, in Landlord's sole discretion, Landlord may require Tenant to stop the performance of Alterations during normal business hours and to perform the same after hours.

SIGNAGE.

Restrictions. Tenant shall have the right to install Building standard signage identifying Tenant's business at the entrance to the Premises, which signage shall be subject to Landlord's prior written consent (which consent shall not be unreasonably withheld, conditioned or delayed so long as the same complies with Landlord's then-current signage guidelines for the Building). Subject to the foregoing, Tenant shall not place or suffer to be placed or maintained on the exterior of the Premises, or any part of the interior visible from the exterior thereof, any sign, banner, advertising matter or any other thing of any kind (including, without limitation, any hand-lettered advertising), and shall not place or maintain any decoration, letter or advertising matter on the glass of any window or door of the Premises without first obtaining Landlord's written approval. No signs or blinds may be put on or in any window or elsewhere if visible from the exterior of the Building. Landlord may provide Tenant with building standard blinds for each window within the Premises and Tenant shall install the same at Tenant's sole cost and expense. Tenant may not remove the building standard blinds without Landlord's prior written consent. Tenant may hang its own drapes, provided that they shall not in any way interfere with any building standard drapery or blinds provided by Landlord or be visible from the exterior of the Building, and that such drapes are so hung and installed that, when drawn, the building standard drapery or blinds are automatically also drawn.

Building Directory. Landlord shall list Tenant within the directory in the Building lobby at Landlord's sole cost and expense. Subject to reasonable limits on the number of lines on the directory Landlord can provide and all such additional signage in the lobby directory, Landlord shall add the names of any approved subtenants or licensees occupying any portion of the Premises at Tenant's sole cost and expense.

Monument Sign. Subject to the issuance of applicable permits and approvals and subject further to Legal Requirements, Landlord intends to install a monument sign on the Property on which Landlord shall list Tenant's name (as well as the names of other tenants or occupants of the Building). Such listing shall comply with Landlord's then-current signage guidelines for the Property.

ASSIGNMENT, MORTGAGING AND SUBLETTING.

Landlord's Consent Required. Tenant shall not, without Landlord's prior written consent, which consent may be withheld in Landlord's sole discretion, mortgage or otherwise encumber this Lease or the Premises in whole or in part Except as expressly otherwise set forth herein, Tenant shall not, without Landlord's prior written consent, which consent shall be granted or withheld in accordance with Section 13.3 below, assign, sublet, mortgage, license, transfer or encumber this Lease or the Premises in whole or in part whether by changes in the ownership or control of Tenant, or any direct or indirect owner

of Tenant, whether at one time or at intervals, by sale or transfer of stock, partnership or beneficial interests, operation of law or otherwise, or permit the occupancy of all or any portion of the Premises by any person or entity other than Tenant's employees (each of the foregoing, a "**Transfer**"). Any purported Transfer made without Landlord's consent, if required hereunder, shall be void and confer no rights upon any third person, provided that if there is a Transfer, Landlord may collect rent from the transferee without waiving the prohibition against Transfers, accepting the transferee, or releasing Tenant from full performance under this Lease. In the event of any Transfer in violation of this Section 13, Landlord shall have the right to terminate this Lease upon thirty (30) days' written notice to Tenant given within sixty (60) days after receipt of written notice from Tenant to Landlord of any Transfer, or within one (1) year after Landlord first learns of the Transfer if no notice is given. No Transfer shall relieve Tenant of its primary obligation as party Tenant hereunder, nor shall it reduce or increase Landlord's obligations under this Lease. In no event shall any transfer of shares in Tenant over a nationally recognized stock exchange be deemed to be a Transfer.

Landlord's Recapture Right.

(z) Subject to Section 13.7 below, Tenant shall, prior to offering or advertising the Premises or any portion thereof for a Transfer, give a written notice (the "**Recapture Notice**") to Landlord which: (i) states that Tenant desires to make a Transfer, (ii) identifies the affected portion of the Premises (the "**Recapture Premises**"), (iii) identifies the period of time (the "**Recapture Period**") during which Tenant proposes to sublet the Recapture Premises, or indicates that Tenant proposes to assign its interest in this Lease, and (iv) offers to Landlord to terminate this Lease with respect to the Recapture Premises (in the case of a proposed assignment of Tenant's interest in this Lease or a subletting for the remainder of the term of this Lease) or to suspend the Term for the Recapture Period (i.e. the Term with respect to the Recapture Premises shall be terminated during the Recapture Period and Tenant's rental obligations shall be proportionately reduced). Landlord shall have fifteen (15) business days within which to respond to the Recapture Notice.

(aa) If Tenant does not enter into a Transfer on the terms and conditions contained in the Recapture Notice on or before the date which is one hundred eighty (180) days after the earlier of: (x) the expiration of the 15-business day period specified in Section 13.2(a) above, or (y) the date that Landlord notifies Tenant that Landlord will not accept Tenant's offer contained in the Recapture Notice, *time being of the essence*, then prior to entering into any Transfer after such 180-day period, Tenant must deliver to Landlord a new Recapture Notice in accordance with Section 13.2(a) above.

(bb) Notwithstanding anything to the contrary contained herein, if Landlord notifies Tenant that it accepts the offer contained in the Recapture Notice or any subsequent Recapture Notice, Tenant shall have the right, for a period of fifteen (15) days following receipt of such notice from Landlord, *time being of the essence*, to notify Landlord in writing that it wishes to withdraw such offer and this Lease shall continue in full force and effect.

(cc) The terms of this Section 13.2 shall not apply to any Transfer to an Affiliated Entity or Successor (each as hereinafter defined).

Standard of Consent to Transfer. If Landlord does not timely give written notice to Tenant accepting an offer contemplated in a Recapture Notice or declines to accept the same, then Landlord agrees that, subject to the provisions of this Section 13, Landlord shall not unreasonably withhold, condition or delay its consent to a Transfer at fair market rent and otherwise on the terms contained in the Recapture Notice to an entity which will use the Premises for the Permitted Uses (provided that such consent shall be given or denied within thirty (30) days after Tenant's request therefor) and, in Landlord's reasonable opinion: (a) has a tangible net worth and other financial indicators sufficient to meet the

Transferee's obligations under the Transfer instrument in question; (b) has a business reputation compatible with the operation of a first-class combination laboratory, research, development and office building; and (c) the intended use of such entity does not violate any exclusive or restrictive use provisions of any leases then in effect with respect to space in the Building; provided, however, if there shall be, at the time that Landlord is otherwise required to provide its consent, an event which, with the passage of time and/or the giving of notice, would constitute an Event of Default, then it shall be reasonable for Landlord to condition its consent to the Transfer in question on Tenant's cure of such default prior to the expiration of applicable cure periods set forth in Section 20.1.

Listing Confers no Rights. The listing of any name other than that of Tenant, whether on the doors of the Premises or on the Building directory, or otherwise, shall not operate to vest in any such other person, firm or corporation any right or interest in this Lease or in the Premises or be deemed to effect or evidence any consent of Landlord, it being expressly understood that any such listing is a privilege extended by Landlord revocable at will by written notice to Tenant.

Profits In Connection with Transfers. Tenant shall, within thirty (30) days of receipt thereof, pay to Landlord fifty percent (50%) of any rent, sum or other consideration to be paid or given in connection with any Transfer, either initially or over time, after deducting reasonable actual out-of-pocket legal, and brokerage expenses incurred by Tenant, market concessions granted to the applicable Transferee and unamortized improvements paid for by Tenant in connection therewith, in excess of Rent hereunder as if such amount were originally called for by the terms of this Lease as additional rent. This Section 13.5 shall not apply to any Transfer to a Successor.

Prohibited Transfers. Notwithstanding any contrary provision of this Lease, Tenant shall have no right to make a Transfer unless on both (i) the date on which Tenant notifies Landlord of its intention to enter into a Transfer and (ii) the date on which such Transfer is to take effect, there is not an Event of Default. Notwithstanding anything to the contrary contained herein, Tenant agrees that in no event shall Tenant make a Transfer to (a) any government agency; (b) any tenant, subtenant or occupant of other space in the Building; or (c) any entity with whom Landlord shall have negotiated for space in the Property in the six (6) months immediately preceding such proposed Transfer.

Exceptions to Requirement for Consent. Notwithstanding anything to the contrary herein contained, Tenant shall have the right, without obtaining Landlord's consent and without giving Landlord a Recapture Notice, upon prior written notice to Landlord, to (a) enter into license agreements with respect to the use of desks or benches or collaboration agreements with respect to up to 50% of the Premises in the aggregate, (b) make a Transfer to an Affiliated Entity (hereinafter defined) so long as such entity remains in such relationship to Tenant, and (b) assign Tenant's interest in this Lease and the Premises to a Successor, provided that prior to or simultaneously with any assignment, such Affiliated Entity or Successor, as the case may be, and Tenant execute and deliver to Landlord an assignment and assumption agreement in form and substance reasonably acceptable to Landlord whereby such Affiliated Entity or Successor, as the case may be, shall agree to be independently bound by and upon all the covenants, agreements, terms, provisions and conditions set forth in the Lease on the part of Tenant to be performed, and whereby such Affiliated Entity or Successor, as the case may be, shall expressly agree that the provisions of this Section 13 shall, notwithstanding such Transfer, continue to be binding upon it with respect to all future Transfers. For the purposes hereof, an "**Affiliated Entity**" shall be defined as any entity which is controlled by, is under common control with, or which controls Tenant. For the purposes hereof, a "**Successor**" shall be defined as any entity into or with which Tenant is merged or with which Tenant is consolidated or which acquires all or substantially all of Tenant's stock or assets, provided that the surviving entity shall have a net worth greater than or equal to the net worth of Tenant prior to such assignment. Notwithstanding the provisions of this Section 13.7, no transaction or series of transactions which are effected solely for the purpose of qualifying as a transaction which does not require Landlord's consent (i.e. and thereby avoiding the operation of the provisions of this Article 13) shall be permitted pursuant to this Section 13.7.

Tenant's Insurance.

(dd) Tenant shall procure, pay for and keep in force throughout the Term (and for so long thereafter as Tenant remains in occupancy of the Premises) commercial general liability insurance insuring Tenant on an occurrence basis against all claims and demands for personal injury liability (including, without limitation, bodily injury, sickness, disease, and death) or damage to property which may be claimed to have occurred from and after the time any of the Tenant Parties shall first enter the Premises, of not less than Two Million Dollars (\$2,000,000) per occurrence, Four Million Dollars (\$4,000,000) aggregate, and from time to time thereafter shall be not less than such higher amounts, if procurable, as may be reasonably required by Landlord. Tenant shall also carry umbrella liability coverage in an amount of no less than Four Million Dollars (\$4,000,000). Such policy shall also include contractual liability coverage covering Tenant's liability assumed under this Lease, including without limitation Tenant's indemnification obligations. Such insurance policy(ies) shall name Landlord, Landlord's managing agent and persons claiming by, through or under them (and of whom Tenant has been provided written notice), if any, as additional insureds.

(ee) Tenant shall take out and maintain throughout the Term a policy of fire, vandalism, malicious mischief, extended coverage and so-called "all risk" coverage insurance in an amount equal to one hundred percent (100%) of the replacement cost insuring (i) all items or components of Tenant's Alterations (collectively, the "**Tenant-Insured Improvements**"), and (ii) Tenant's furniture, equipment, fixtures and property of every kind, nature and description related or arising out of Tenant's leasehold estate hereunder, which may be in or upon the Premises or the Building (collectively, "**Tenant's Property**"). Such insurance shall insure the interests of both Landlord and Tenant as their respective interests may appear from time to time.

(ff) Tenant shall take out and maintain a policy of business interruption insurance throughout the Term sufficient to cover Tenant's business losses, including Rent due hereunder, during a 12-month period.

(gg) Tenant shall procure and maintain at its sole expense such additional insurance as may be necessary to comply with any Legal Requirements.

(hh) During periods when any Alterations are being performed, Builders Risk Insurance.

(ii) The insurance required pursuant to Sections 14.1(a), (b), (c), (d) and (e) (collectively, "**Tenant's Insurance Policies**") shall be effected with insurers approved by Landlord, with a rating of not less than "A-XI" in the current *Best's Insurance Reports*, and authorized to do business in the Commonwealth of Massachusetts under valid and enforceable policies. Tenant shall use good faith efforts to include within Tenant's Insurance Policies provisions stating that Tenant's Insurance Policies shall not be canceled without at least thirty (30) days' prior written notice to each insured named therein. Tenant shall provide, and shall use good faith efforts to cause its broker of record to provide, prior written notice to Landlord of any reduction in the coverage amounts of any of Tenant's Insurance Policies below the coverages required hereunder. Tenant's Insurance Policies may include deductibles in an amount no greater than the greater of \$25,000 or commercially reasonable amounts. Tenant shall deliver to Landlord on or before the date on which any of the Tenant Parties shall first enter the Premises and thereafter not

less than fifteen (15) days prior to the expiration date of each expiring policy, binders of Tenant's Insurance Policies issued by the respective insurers setting forth in full the provisions thereof together with evidence satisfactory to Landlord of the payment of all premiums for such policies. In the event of any claim, and upon Landlord's request, Tenant shall deliver to Landlord complete copies of Tenant's Insurance Policies. Upon request of Landlord, Tenant shall deliver to any Mortgagee copies of the foregoing documents.

Indemnification.

(jj) Except to the extent caused by the negligence or willful misconduct of any of the Landlord Parties, Tenant shall defend, indemnify and save the Landlord Parties harmless from and against any and all Claims asserted by or on behalf of any person, firm, corporation or public authority arising from:

(i) Tenant's breach of any covenant or obligation under this Lease;

(ii) Any injury to or death of any person, or loss of or damage to property, sustained or occurring in, upon, at or about the Premises;

(iii) Any injury to or death of any person, or loss of or damage to property arising out of the use or occupancy of the Premises by or the negligence or willful misconduct of any of the Tenant Parties; and

(iv) On account of or based upon any work or thing whatsoever done (other than by Landlord or any of the Landlord Parties) at the Premises during the Term and during the period of time, if any, prior to the Term Commencement Date that any of the Tenant Parties may have been given access to the Premises.

(kk) Except to the extent caused by the negligence or willful misconduct of any of the Tenant Parties, Landlord shall defend, indemnify and save Tenant harmless from and against any and all Claims asserted by or on behalf of any person, firm, corporation or public authority arising from (i) Landlord's breach of any covenant or obligation under this Lease, or (ii) any injury to or death of any person, or loss of or damage to property arising out of the negligence or willful misconduct of any of the Landlord Parties.

Property of Tenant. Tenant covenants and agrees that, to the maximum extent permitted by Legal Requirements, all of Tenant's Property at the Premises shall be at the sole risk and hazard of Tenant, and that if the whole or any part thereof shall be damaged, destroyed, stolen or removed from any cause or reason whatsoever, no part of said damage or loss shall be charged to, or borne by, Landlord, except, subject to Section 14.5 hereof, to the extent such damage or loss is due to the negligence or willful misconduct of any of the Landlord Parties.

Limitation of Landlord's Liability for Damage or Injury. Landlord shall not be liable for any injury or damage to persons, animals, or property resulting from fire, explosion, falling plaster, steam, gas, air contaminants or emissions, electricity, electrical or electronic emanations or disturbance, water, rain or snow or leaks from any part of the Building or from the pipes, appliances, equipment or plumbing works or from the roof, street or sub-surface or from any other place or caused by dampness, vandalism, malicious mischief or by any other cause of whatever nature, except to the extent caused by or due to the negligence or willful misconduct of any of the Landlord Parties, and then, where notice and an opportunity to cure are appropriate (i.e., where Tenant has an opportunity to know or should have known of such condition sufficiently in advance of the occurrence of any such injury or damage resulting

therefrom as would have enabled Landlord to prevent such damage or loss had Tenant notified Landlord of such condition) only after (i) notice to Landlord of the condition claimed to constitute negligence or willful misconduct, and (ii) the expiration of a reasonable time after such notice has been received by Landlord without Landlord having commenced to take all reasonable and practicable means to cure or correct such condition; and pending such cure or correction by Landlord, Tenant shall take all reasonably prudent temporary measures and safeguards to prevent any injury, loss or damage to persons or property. Notwithstanding the foregoing, in no event shall any of the Landlord Parties be liable for any loss which is covered by insurance policies actually carried or required to be so carried by this Lease; nor shall any of the Landlord Parties be liable for any such damage caused by other tenants or persons in the Building or caused by operations in construction of any private, public, or quasi-public work; nor shall any of the Landlord Parties be liable for any latent defect in the Premises or in the Building.

Waiver of Subrogation; Mutual Release. Landlord and Tenant each hereby waives on behalf of itself and its property insurers (none of which shall ever be assigned any such claim or be entitled thereto due to subrogation or otherwise) any and all rights of recovery, claim, action, or cause of action against the other and its agents, officers, servants, partners, shareholders, or employees (collectively, the “**Related Parties**”) for any loss or damage (excluding rights of recovery, claims, actions, and causes of action relating to damage to the roof of the Building caused by Tenant but including rights of recovery, claims, actions, and causes of action relating to damage to the roof of the Building caused by any Casualty (hereinafter defined)) that may occur to or within the Premises or the Building or any improvements thereto, or any personal property of such party therein which is insured against under any property insurance policy actually being maintained by the waiving party from time to time, even if not required hereunder, or which would be insured against under the terms of any insurance policy required to be carried or maintained by the waiving party hereunder, whether or not such insurance coverage is actually being maintained, including, in every instance, such loss or damage that may be caused by the negligence of the other party hereto and/or its Related Parties. Landlord and Tenant each agrees to cause appropriate clauses to be included in its property insurance policies necessary to implement the foregoing provisions.

Tenant’s Acts—Effect on Insurance. Tenant shall not do or permit any Tenant Party to do any act or thing upon the Premises or elsewhere in the Building which will invalidate or be in conflict with any insurance policies or warranties covering the Building and the fixtures and property therein; and shall not do, or permit to be done, any act or thing upon the Premises which shall subject Landlord to any liability or responsibility for injury to any person or persons or to property by reason of any business or operation being carried on upon said Premises or for any other reason. If by reason of the failure of Tenant to comply with the provisions hereof the insurance rate applicable to any policy of insurance shall at any time thereafter be higher than it otherwise would be, Tenant shall reimburse Landlord upon demand for that part of any insurance premiums which shall have been charged because of such failure by Tenant, together with interest at the Default Rate until paid in full, within ten (10) days after receipt of an invoice therefor.

CASUALTY; TAKING.

Damage. If the Premises are damaged in whole or part because of fire or other insured casualty (“**Casualty**”), or if the Premises are subject to a taking in connection with the exercise of any power of eminent domain, condemnation, or purchase under threat or in lieu thereof (any of the foregoing, a “**Taking**”), then unless this Lease is terminated in accordance with Section 15.2 below, Landlord shall restore the Building and/or the Premises to substantially the same condition as existed immediately following completion of Landlord’s Work, or in the event of a partial Taking which affects the Building and the Premises, restore the remainder of the Building and the Premises not so Taken to substantially the same condition as is reasonably feasible. Within ninety (90) days following such Casualty or Taking,

Landlord shall provide Tenant with a written notice (the “**Restoration Notice**”) indicating the expected timeframe for completion of Landlord’s repair and restoration. If, in Landlord’s reasonable judgment, any element of the Tenant-Insured Improvements can more effectively be restored as an integral part of Landlord’s restoration of the Building or the Premises, such restoration shall also be made by Landlord, but at Tenant’s sole cost and expense. Subject to rights of Mortgagees, Tenant Delays, Legal Requirements then in existence and to delays for adjustment of insurance proceeds or Taking awards, as the case may be, and instances of Landlord’s Force Majeure, Landlord shall substantially complete such restoration within one (1) year after Landlord’s receipt of all required permits therefor. Upon substantial completion of such restoration by Landlord, Tenant shall use diligent efforts to complete restoration of the Premises to substantially the same condition as existed immediately prior to such Casualty or Taking, as the case may be, as soon as reasonably possible. Tenant agrees to cooperate with Landlord in such manner as Landlord may reasonably request to assist Landlord in collecting insurance proceeds due in connection with any Casualty which affects the Premises or the Building. In no event shall Landlord be required to expend more than the Net (hereinafter defined) insurance proceeds Landlord receives for damage to the Premises and/or the Building or the Net Taking award attributable to the Premises and/or the Building. “**Net**” means the insurance proceeds or Taking award actually paid to Landlord (and not paid over to a Mortgagee) less all costs and expenses, including adjusters and attorney’s fees, of obtaining the same. In the Operating Year in which a Casualty occurs, there shall be included in Operating Costs Landlord’s deductible under its property insurance policy. Except as Landlord may elect pursuant to this Section 15.1, under no circumstances shall Landlord be required to repair any damage to, or make any repairs to or replacements of, any Tenant-Insured Improvements.

Termination Rights.

(ll) Landlord’s Termination Rights. Landlord may terminate this Lease upon thirty (30) days’ prior written notice to Tenant if:

- (i) any material portion of the Building or any material means of access thereto is taken;
- (ii) more than thirty-five percent (35%) of the Building is damaged by Casualty; or
- (iii) if the estimated time to complete restoration exceeds one (1) year from the date on which Landlord receives all required permits for such restoration.

(mm) Tenant’s Termination Right. If (i) Landlord is so required but fails to complete restoration of the Premises within the time frames and subject to the conditions set forth in Section 15.1 above, or (ii) the expected timeframe for completion of Landlord’s repair and restoration set forth by Landlord in the Restoration Notice exceeds one (1) year from the date of Casualty or Taking, then Tenant may terminate this Lease upon thirty (30) days’ written notice to Landlord; provided, however, that if Landlord completes such restoration within thirty (30) days after receipt of any such termination notice, such termination notice shall be null and void and this Lease shall continue in full force and effect. The remedies set forth in this Section 15.2(b) and in Section 15.2(c) below are Tenant’s sole and exclusive rights and remedies based upon Landlord’s failure to complete the restoration of the Premises as set forth herein.

(nn) Either Party May Terminate. In the case of any Casualty or Taking affecting the Premises and occurring during the last six (6) months of the Term, then (i) if such Casualty or Taking results in more than twenty-five percent (25%) of the floor area of the Premises being unsuitable for the Permitted Uses, or (ii) the damage to the Premises costs more than \$100,000 to restore, then either

Landlord or Tenant shall have the option to terminate this Lease upon thirty (30) days' written notice to the other. In addition, if any Mortgagee does not release sufficient insurance proceeds to cover the cost of Landlord's restoration work and Landlord does not agree in writing to cover the difference, Landlord or Tenant may terminate this Lease by written notice to the other.

(oo) Automatic Termination. In the case of a Taking of the entire Premises, then this Lease shall automatically terminate as of the date of possession by the Taking authority.

(pp) Notwithstanding anything to the contrary contained herein, Tenant may not terminate this Lease pursuant to this Section 15 if the Casualty in question was caused by the willful misconduct of any of the Tenant Parties.

Taking for Temporary Use. If the Premises are Taken for temporary use, this Lease and Tenant's obligations, including without limitation the payment of Rent, shall continue. For purposes hereof, a "Taking for temporary use" shall mean a Taking of ninety (90) days or less.

Disposition of Awards. Except for any separate award for Tenant's movable trade fixtures, relocation expenses, and unamortized leasehold improvements paid for by Tenant (provided that the same may not reduce Landlord's award), all Taking awards to Landlord or Tenant shall be Landlord's property without Tenant's participation, and Tenant hereby assigns to Landlord Tenant's interest, if any, in such award. Tenant may pursue its own claim against the Taking authority.

1.4 Abatement. If all or any portion of the Premises are damaged or made inaccessible by a Casualty or subject to a Taking, Base Rent, Additional Rent on account of Operating Costs and Additional Rent on account of Taxes shall be equitably abated for the period from the date of such Casualty or Taking until the earlier of (a) the date that Landlord substantially completes Landlord's restoration work (provided that if Landlord would have completed Landlord's restoration work at an earlier date but for (i) Tenant having failed to reasonably cooperate with Landlord in effecting such work or collecting insurance proceeds, and/or (ii) Tenant Delays, then the Premises shall be deemed to have been repaired and restored on such earlier date), or (b) the date Tenant or other occupant reoccupies all or such affected portion of the Premises (in which case the Base Rent and Additional Rent allocable to such reoccupied portion shall be payable by Tenant from the date of such occupancy). The reasonable determination of Landlord's architect of the date Landlord's restoration work shall have been substantially completed shall be controlling unless Tenant disputes same by notice to Landlord given within fifteen (15) days after receipt of written notice from Landlord setting forth such determination by Landlord, and pending resolution of such dispute, Tenant's restoration period (and Tenant's obligation to re-commence the payment of Rent) shall commence in accordance with Landlord's architect's reasonable determination. In the event of a Taking where the Lease is not terminated, a just proportion of the Rent, based on the nature and extent of the interference with Tenant's business operations, shall, subject to Section 15.3 above, be abated for the duration of the Taking.

ESTOPPEL CERTIFICATE. Tenant shall at any time and from time to time upon not less than ten (10) days' prior notice from Landlord, execute, acknowledge and deliver to Landlord a statement in writing certifying that this Lease is unmodified and in full force and effect (or if there have been modifications, that the same is in full force and effect as modified and stating the modifications), and the dates to which Rent has been paid in advance, if any, stating whether or not Landlord is in default in performance of any covenant, agreement, term, provision or condition contained in this Lease and, if so, specifying each such default, and such other facts as Landlord may reasonably request, it being intended that any such statement delivered pursuant hereto may be relied upon by Landlord, any prospective purchaser of the Building or of any interest of Landlord therein, any Mortgagee or prospective mortgagee thereof, any lessor or prospective lessor thereof, any lessee or prospective lessee thereof, or any prospective assignee of any mortgage thereof. *Time is of the essence with respect to any such requested certificate*, Tenant hereby acknowledging the importance of such certificates in mortgage financing arrangements, prospective sales and the like.

HAZARDOUS MATERIALS.

Prohibition. Tenant shall not, without the prior written consent of Landlord, bring or permit to be brought or kept in or on the Premises or elsewhere in the Building or the Property (i) any inflammable, combustible or explosive fluid, material, chemical or substance (except for standard office supplies stored in proper containers); and (ii) any Hazardous Material (hereinafter defined), other than the types and quantities of Hazardous Materials which are listed on Exhibit 6 attached hereto (“**Tenant’s Hazardous Materials**”), provided that the same shall at all times be brought upon, kept or used in so-called ‘control rooms’ and in accordance with all applicable Environmental Laws (hereinafter defined) and prudent environmental practice and (with respect to medical waste and so-called “biohazard” materials) good scientific and medical practice, and provided further that in no event shall Tenant generate, produce, bring upon, use, store or treat any infectious biological micro-organisms or any other Hazardous Materials in the Premises with a risk category above the level of Biosafety Level 2 as established and described by the Department of Health and Human Services Publication Biosafety in Microbiological and Biomedical Laboratories (Fifth Edition) (the “**BMBL**”), as it may be further revised (or such nationally recognized new or replacement standards as may be reasonably selected by Landlord). In all events, Tenant shall comply with all applicable provisions of the BMBL. Tenant shall be responsible for assuring that all laboratory uses are adequately and properly vented. On or before each anniversary of the Rent Commencement Date, and on any earlier date during the 12-month period on which Tenant intends to add a new Hazardous Material to, or materially increase the quantity of any Hazardous Material already on, the list of Tenant’s Hazardous Materials, Tenant shall submit to Landlord an updated list of Tenant’s Hazardous Materials for Landlord’s review and approval, which approval shall not be unreasonably withheld, conditioned or delayed. Landlord shall have the right, from time to time, to inspect the Premises for compliance with the terms of this Section 17.1 at Tenant’s sole cost and expense. Notwithstanding the foregoing, with respect to any of Tenant’s Hazardous Materials which Tenant does not properly handle, store or dispose of in compliance with all applicable Environmental Laws (hereinafter defined), prudent environmental practice and (with respect to medical waste and so-called “biohazard” materials) good scientific and medical practice, Tenant shall, upon written notice from Landlord, no longer have the right to bring such material into the Building or the Property until Tenant has demonstrated, to Landlord’s reasonable satisfaction, that Tenant has implemented programs to thereafter properly handle, store or dispose of such material.

Environmental Laws. For purposes hereof, “Environmental Laws” shall mean all laws, statutes, ordinances, rules and regulations of any local, state or federal governmental authority having jurisdiction concerning environmental, health and safety matters, including but not limited to any discharge by any of the Tenant Parties into the air, surface water, sewers, soil or groundwater of any Hazardous Material (hereinafter defined) whether within or outside the Premises, including, without limitation (a) the Federal Water Pollution Control Act, 33 U.S.C. Section 1251 et seq., (b) the Federal Resource Conservation and Recovery Act, 42 U.S.C. Section 6901 et seq., (c) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601 et seq., (d) the Toxic Substances Control Act of 1976, 15 U.S.C. Section 2601 et seq., (e) Chapter 21C of the General Laws of Massachusetts, and (f) Chapter 21E of the General Laws of Massachusetts. Tenant, at its sole cost and expense, shall comply with (i) all Environmental Laws, and (ii) any rules, requirements and safety procedures of the Massachusetts Department of Environmental Protection, the City of Cambridge and any insurer of the Building or the Premises with respect to Tenant’s use, storage and disposal of any Hazardous Materials.

Hazardous Material Defined. As used herein, the term “**Hazardous Material**” means asbestos, oil or any hazardous, radioactive or toxic substance, material or waste or petroleum derivative which is or becomes regulated by any Environmental Law, including without limitation live organisms, viruses and fungi, medical waste and any so-called “biohazard” materials, and any materials on the right to know list of the Occupational Safety and Health Administration. The term “**Hazardous Material**” includes, without limitation, oil and/or any material or substance which is (i) designated as a “hazardous substance,” “hazardous material,” “oil,” “hazardous waste” or toxic substance under any Environmental Law, or (ii) contains any component now or hereafter designated as such.

Testing. If any Mortgagee or governmental authority requires testing to determine whether there has been any release of Hazardous Materials and such testing is required as a result of the acts or omissions of any of the Tenant Parties, then Tenant shall reimburse Landlord upon demand, as additional rent, for the reasonable costs thereof, together with interest at the Default Rate until paid in full. Tenant shall execute affidavits, certifications and the like, as may be reasonably requested by Landlord from time to time concerning Tenant’s best knowledge and belief concerning the presence of Hazardous Materials in or on the Premises, the Building or the Property.

1.5 Indemnity; Remediation.

(a) Tenant hereby covenants and agrees to indemnify, defend and hold the Landlord Parties harmless from and against any and all Claims against any of the Landlord Parties arising out of contamination of any part of the Property or other adjacent property, which contamination arises as a result of:

(i) the presence of any Hazardous Material in the Premises, the presence of which is caused by any act or omission of any of the Tenant Parties, or (ii) from a breach by Tenant of its obligations under this Section 17. This indemnification of the Landlord Parties by Tenant includes, without limitation, reasonable costs incurred in connection with any investigation of site conditions or any cleanup, remedial, removal or restoration work or any other response action required by any federal, state or local governmental agency or political subdivision because of Hazardous Material present in the soil, soil vapor, or ground water on or under, or any indoor air in, the Building based upon the circumstances identified in the first sentence of this Section 17.5. The indemnification and hold harmless obligations of Tenant under this Section 17.5 shall survive the expiration or any earlier termination of this Lease. Without limiting the foregoing, if the presence of any Hazardous Material in the Building or otherwise at the Property is caused by any of the Tenant Parties and results in any contamination of any part of the Property or any adjacent property, Tenant shall promptly take all actions at Tenant’s sole cost and expense as are necessary to return the Property and/or the Building or any adjacent property to their condition as of the date of this Lease, provided that Tenant shall first obtain Landlord’s approval of such actions, which approval shall not be unreasonably withheld, conditioned or delayed so long as such actions, in Landlord’s reasonable discretion, would not potentially have any adverse effect on the Property, and, in any event, Landlord shall not withhold its approval of any proposed actions which are required by applicable Environmental Laws.

(b) Without limiting the obligations set forth in Section 17.5(a) above, if any Hazardous Material is in, on, under, at or about the Building or the Property as a result of the acts or omissions of any of the Tenant Parties and results in any contamination of any part of the Property or any adjacent property that is in violation of any applicable Environmental Law or that requires the performance of any response action pursuant to any Environmental Law, Tenant shall promptly take all actions at Tenant’s sole cost and expense as are necessary to reduce such Hazardous Material to amounts below any applicable Reportable Quantity, any applicable Reportable Concentration and any other applicable standard set forth in Environmental Laws such that no further response actions are required; provided that Tenant shall first obtain Landlord’s written approval of such actions, which approval shall not be unreasonably withheld, conditioned or delayed so long as such actions would not be reasonably

expected to have an adverse effect on the market value or utility of the Property for the Permitted Uses, and in any event, Landlord shall not withhold its approval of any proposed actions which are required by applicable Environmental Laws (such approved actions, "**Tenant's Remediation**"). For the avoidance of doubt, the parties acknowledge that Tenant's Remediation with respect to the Property shall not contain any requirement that Tenant remediate any contamination to levels or standards more stringent than those associated with the use of the Property for office, research and development, laboratory, and vivarium uses.

(c) In the event that Tenant fails to complete Tenant's Remediation prior to the end of the Term, then:

(i) until the completion of Tenant's Remediation (as evidenced by the certification of Tenant's Licensed Site Professional (as such term is defined by applicable Environmental Laws), who shall be reasonably acceptable to Landlord) (the "**Remediation Completion Date**"), Tenant shall pay to Landlord, with respect to the portion of the Premises which reasonably cannot be occupied by a new tenant until completion of Tenant's Remediation, (A) Additional Rent on account of Operating Costs and Taxes and (B) Base Rent in an amount equal to the greater of (1) the fair market rental value of such portion of the Premises (determined in substantial accordance with the process described in Section 1.2 above), and (2) Base Rent attributable to such portion of the Premises in effect immediately prior to the end of the Term; and

(ii) Tenant shall maintain responsibility for Tenant's Remediation and Tenant shall complete Tenant's Remediation as soon as reasonably practicable in accordance with all Environmental Laws. If Tenant does not diligently pursue completion of Tenant's Remediation, Landlord shall have the right to either (A) assume control for overseeing Tenant's Remediation, in which event Tenant shall pay all reasonable costs and expenses of Tenant's Remediation (it being understood and agreed that all costs and expenses of Tenant's Remediation incurred pursuant to contracts entered into by Tenant shall be deemed reasonable) within thirty (30) days of demand therefor (which demand shall be made no more often than monthly), and Landlord shall be substituted as the party identified on any governmental filings as the party responsible for the performance of such Tenant's Remediation or (B) require Tenant to maintain responsibility for Tenant's Remediation, in which event Tenant shall complete Tenant's Remediation as soon as reasonably practicable in accordance with all Environmental Laws, it being understood that Tenant's Remediation shall not contain any requirement that Tenant remediate any contamination to levels or standards more stringent than those associated with the Property's current office, research and development, laboratory, and vivarium uses.

(d) The provisions of this Section 17.5 shall survive the expiration or earlier termination of this Lease.

Disclosures. Prior to bringing any Hazardous Material into any part of the Property, Tenant shall deliver to Landlord the following information with respect thereto: (a) a description of handling, storage, use and disposal procedures; (b) all plans or disclosures and/or emergency response plans which Tenant has prepared, including without limitation Tenant's Spill Response Plan, and all plans which Tenant is required to supply to any governmental agency or authority pursuant to any Environmental Laws; and (c) other information reasonably requested by Landlord.

Removal. Tenant shall be responsible, at its sole cost and expense, for Hazardous Material and other biohazard disposal services for the Premises. Such services shall be performed by contractors reasonably acceptable to Landlord and on a sufficient basis to ensure that the Premises are at all times kept neat, clean and free of Hazardous Materials and biohazards except in appropriate, specially marked containers reasonably approved by Landlord. In addition, if any Legal Requirements or the trash removal company requires that any substances be disposed of separately from ordinary trash, Tenant shall make arrangements at Tenant's expense for such disposal directly with a qualified and licensed disposal company at a lawful disposal site.

RULES AND REGULATIONS.

Rules and Regulations. Tenant will faithfully observe and comply with all rules and regulations promulgated from time to time with respect to the Building, the Property and construction within the Property (collectively, the “**Rules and Regulations**”). The current version of the Rules and Regulations is attached hereto as Exhibit 7. In the case of any conflict between the provisions of this Lease and any future rules and regulations, the provisions of this Lease shall control. Nothing contained in this Lease shall be construed to impose upon Landlord any duty or obligation to enforce the Rules and Regulations or the terms, covenants or conditions in any other lease as against any other tenant and Landlord shall not be liable to Tenant for violation of the same by any other tenant, its servants, employees, agents, contractors, visitors, invitees or licensees.

Energy Conservation. Notwithstanding anything to the contrary contained herein, Landlord may institute upon written notice to Tenant such policies, programs and measures as may be necessary, required, or expedient for the conservation and/or preservation of energy or energy services (collectively, the “**Conservation Program**”), provided however, that the Conservation Program does not, by reason of such policies, programs and measures, reduce the level of energy or energy services being provided to the Premises below the level of energy or energy services then being provided in comparably aged, first-class combination laboratory, research and development and office buildings in the vicinity of the Building, or as may be necessary or required to comply with Legal Requirements or standards or the other provisions of this Lease. Upon receipt of such notice, Tenant shall comply with the Conservation Program.

Recycling. Upon written notice, Landlord may establish policies, programs and measures for the recycling of paper, products, plastic, tin and other materials (a “**Recycling Program**”). Upon receipt of such notice, Tenant will comply with the Recycling Program at Tenant’s sole cost and expense.

LAWS AND PERMITS.

Legal Requirements. Tenant shall be responsible at its sole cost and expense for complying with (and keeping the Premises in compliance with) all Legal Requirements which are applicable to Tenant’s particular use or occupancy of, or Alterations made by or on behalf of Tenant to, the Premises. Tenant shall furnish all data and information to governmental authorities, with a copy to Landlord, as required in accordance with Legal Requirements as they relate to Tenant’s use or occupancy of the Premises or the Building. If Tenant receives notice of any violation of Legal Requirements applicable to the Premises or the Building, it shall give prompt notice thereof to Landlord. Nothing contained in this Section 19.1 shall be construed to expand the uses permitted hereunder beyond the Permitted Uses. Landlord shall comply with any Legal Requirements and with any direction of any public office or officer relating to the maintenance or operation of the Building as a combination laboratory, research and development and office building, and the costs so incurred by Landlord shall be included in Operating Costs in accordance with the provisions of Section 5.2.

Required Permits. Tenant shall, at Tenant’s sole cost and expense, use diligent good faith efforts to apply for, seek and obtain all necessary state and local licenses, permits and approvals needed for the operation of Tenant’s business, excluding the certificate of occupancy which Tenant must obtain prior to operating its business in the Premises (collectively, the “**Required Permits**”), on or before the Rent Commencement Date, *time being of the essence*. Tenant shall thereafter maintain all Required Permits. Tenant, at Tenant’s expense, shall at all times comply with the terms and conditions of each such Required Permit. Landlord shall cooperate with Tenant, at Tenant’s sole cost and expense, in connection with its application for Required Permits.

DEFAULT.

Events of Default. The occurrence of any one or more of the following events shall constitute an “**Event of Default**” hereunder by Tenant:

(e) If Tenant fails to make any payment of Rent or any other payment required hereunder, as and when due, and such failure shall continue for a period of five (5) business days after notice thereof from Landlord to Tenant; provided, however, an Event of Default shall occur hereunder without any obligation of Landlord to give any notice if (i) Tenant fails to make any payment within five (5) business days after the due date therefor, and (ii) Landlord has given Tenant written notice under this Section 20.1(a) on two (2) or more occasions during the twelve (12) month interval preceding such failure by Tenant;

(f) If Tenant shall abandon the Premises (whether or not the keys shall have been surrendered or the Rent shall have been paid);

(g) If Tenant shall fail to execute and deliver to Landlord an estoppel certificate pursuant to Section 16 above or a subordination and attornment agreement pursuant to Section 22 below, within the timeframes set forth therein and such failure continues for five (5) days after notice thereof;

(h) If Tenant shall fail to maintain any insurance required hereunder;

(i) If Tenant shall fail to restore the Security Deposit to its original amount or deliver a replacement Letter of Credit as required under Section 7 above;

(j) If Tenant causes or suffers any release of Hazardous Materials in or near the Property;

(k) If Tenant shall make a Transfer in violation of the provisions of Section 13 above, or if any event shall occur or any contingency shall arise whereby this Lease, or the term and estate thereby created, would (by operation of law or otherwise) devolve upon or pass to any person, firm or corporation other than Tenant, except as expressly permitted under Section 13 hereof and Tenant does not cure such default within ten (10) days following written notice from Landlord;

(l) If Tenant shall fail to timely perform its obligations under Section 3 and such failure continues for fifteen (15) days after notice;

(m) The failure by Tenant to observe or perform any of the covenants or provisions of this Lease to be observed or performed by Tenant, other than as specified above, and such failure continues for more than thirty (30) days after notice thereof from Landlord; provided, further, that if the nature of Tenant’s default is such that more than thirty (30) days are reasonably required for its cure, then Tenant shall not be deemed to be in default if Tenant shall commence such cure within said thirty (30) day period and thereafter diligently prosecute such cure to completion, which completion shall occur not later than ninety (90) days from the date of such notice from Landlord;

(n) Tenant shall be involved in financial difficulties as evidenced by an admission in writing by Tenant of Tenant’s inability to pay its debts generally as they become due, or by the making or offering to make a composition of its debts with its creditors;

(o) Tenant shall make an assignment or trust mortgage, or other conveyance or transfer of like nature, of all or a substantial part of its property for the benefit of its creditors,

(p) an attachment on mesne process, on execution or otherwise, or other legal process shall issue against Tenant or its property and a sale of any of its assets shall be held thereunder;

(q) any judgment, attachment or the like in excess of \$100,000 shall be entered, recorded or filed against Tenant in any court, registry, etc. and Tenant shall fail to pay such judgment within thirty (30) days after the judgment shall have become final beyond appeal or to discharge or secure by surety bond such lien, attachment, etc. within thirty (30) days of such entry, recording or filing, as the case may be;

(r) the leasehold hereby created shall be taken on execution or by other process of law and shall not be revested in Tenant within thirty (30) days thereafter;

(s) a receiver, sequesterer, trustee or similar officer shall be appointed by a court of competent jurisdiction to take charge of all or any part of Tenant's Property and such appointment shall not be vacated within thirty (30) days; or

(t) any proceeding shall be instituted by or against Tenant pursuant to any of the provisions of any Act of Congress or State law relating to bankruptcy, reorganizations, arrangements, compositions or other relief from creditors, and, in the case of any proceeding instituted against it, if Tenant shall fail to have such proceedings dismissed within thirty (30) days or if Tenant is adjudged bankrupt or insolvent as a result of any such proceeding.

Tenant shall reimburse Landlord, within thirty (30) days after demand, for up to \$1,000.00 of Landlord's reasonable out-of-pocket costs and expenses (including without limitation legal fees and costs) incurred in connection with the preparation and delivery of each notice of default delivered pursuant to this Section 20.1.

Remedies. Upon an Event of Default, Landlord may, by notice to Tenant, elect to terminate this Lease; and thereupon (and without prejudice to any remedies which might otherwise be available for arrears of Rent or preceding breach of covenant or agreement and without prejudice to Tenant's liability for damages as hereinafter stated), upon the giving of such notice, this Lease shall terminate as of the date specified therein as though that were the Expiration Date. Upon such termination, Landlord shall have the right to utilize the Security Deposit or draw down the entire Letter of Credit, as applicable, and apply the proceeds thereof to its damages hereunder. Without being taken or deemed to be guilty of any manner of trespass or conversion, and without being liable to indictment, prosecution or damages therefor, Landlord may, by lawful process, enter into and upon the Premises (or any part thereof in the name of the whole); repossess the same, as of its former estate; and expel Tenant and those claiming under Tenant. The words "re-entry" and "re-enter" as used in this Lease are not restricted to their technical legal meanings.

Damages—Termination.

(u) Upon the termination of this Lease under the provisions of this Section 20, Tenant shall pay to Landlord Rent up to the time of such termination, shall continue to be liable for any preceding breach of covenant, and in addition, shall pay to Landlord as damages, at the election of Landlord, either:

(i) the amount (discounted to present value at the rate of five percent (5%) per annum) by which, at the time of the termination of this Lease (or at any time thereafter if Landlord shall have initially elected damages under Section 20.3(a)(ii) below), (x) the aggregate of Rent projected over the period commencing with such termination and ending on the Expiration Date, exceeds (y) the aggregate projected fair market rental value of the Premises for such period, taking into account a reasonable time period during which the Premises shall be unoccupied, plus all Reletting Costs (hereinafter defined); or

(ii) amounts equal to Rent which would have been payable by Tenant had this Lease not been so terminated, payable upon the due dates therefor specified herein following such termination and until the Expiration Date, *provided, however*, if Landlord shall re-let the Premises during such period, that Landlord shall credit Tenant with the net rents received by Landlord from such re-letting, such net rents to be determined by first deducting from the gross rents as and when received by Landlord from such re-letting the expenses incurred or paid by Landlord in terminating this Lease, as well as the expenses of re-letting, including altering and preparing the Premises for new tenants, brokers' commissions, and all other similar and dissimilar expenses properly chargeable against the Premises and the rental therefrom (collectively, "**Reletting Costs**"), it being understood that any such re-letting may be for a period equal to or shorter or longer than the remaining Term; and *provided, further*, that (x) in no event shall Tenant be entitled to receive any excess of such net rents over the sums payable by Tenant to Landlord hereunder and (y) in no event shall Tenant be entitled in any suit for the collection of damages pursuant to this Section 20.3(a)(ii) to a credit in respect of any net rents from a re-letting except to the extent that such net rents are actually received by Landlord prior to the commencement of such suit. If the Premises or any part thereof should be re-let in combination with other space, then proper apportionment on a square foot area basis shall be made of the rent received from such re-letting and of the expenses of re-letting. Landlord shall use reasonable efforts to mitigate any damages hereunder following any termination of this Lease or any termination of Tenant's possession of the Premises. The obligation of Landlord to use reasonable efforts to mitigate damages shall not be construed to require Landlord to rent all or any portion of the Premises for a use which, or to a tenant who, would not qualify pursuant to the assignment provisions of this Lease, or to prioritize the renting of the Premises over other space which Landlord may have available in the Building or in other buildings owned by Landlord or its affiliates.

(v) In calculating the amount due under Section 20.3(a)(i), above, there shall be included, in addition to the Base Rent, all other considerations agreed to be paid or performed by Tenant, including without limitation Tenant's Share of Operating Costs and Tenant's Tax Share of Taxes, on the assumption that all such amounts and considerations would have increased at the rate of five percent (5%) per annum for the balance of the full term hereby granted.

(w) Suit or suits for the recovery of such damages, or any installments thereof, may be brought by Landlord from time to time at its election, and nothing contained herein shall be deemed to require Landlord to postpone suit until the date when the Term would have expired if it had not been terminated hereunder.

(x) Nothing herein contained shall be construed as limiting or precluding the recovery by Landlord against Tenant of any sums or damages to which, in addition to the damages particularly provided above, Landlord may lawfully be entitled by reason of any Event of Default hereunder.

(y) In lieu of any other damages or indemnity and in lieu of full recovery by Landlord of all sums payable under all the foregoing provisions of this Section 20.3, Landlord may, by written notice to Tenant, at any time after this Lease is terminated under any of the provisions herein

contained or is otherwise terminated for breach of any obligation of Tenant and before such full recovery, elect to recover, and Tenant shall thereupon pay, as liquidated damages, an amount equal to the aggregate of (x) an amount equal to the lesser of (1) Rent accrued under this Lease in the twelve (12) months immediately prior to such termination, or (2) Rent payable during the remaining months of the Term if this Lease had not been terminated, plus (y) the amount of Rent accrued and unpaid at the time of termination, less (z) the amount of any recovery by Landlord under the foregoing provisions of this Section 20.3 up to the time of payment of such liquidated damages.

Landlord's Self-Help; Fees and Expenses. If Tenant shall default in the performance of any covenant on Tenant's part to be performed in this Lease contained, including without limitation the obligation to maintain the Premises in the required condition pursuant to Section 10.1 above, Landlord may, upon reasonable advance notice, except that no notice shall be required in an emergency, immediately, or at any time thereafter, perform the same for the account of Tenant. Tenant shall pay to Landlord upon demand therefor any costs incurred by Landlord in connection therewith, together with interest at the Default Rate until paid in full. In addition, Tenant shall pay all of Landlord's costs and expenses, including without limitation reasonable attorneys' fees, incurred (i) in enforcing any obligation of Tenant under this Lease or (ii) as a result of Landlord or any of the Landlord Parties, without its fault, being made party to any litigation pending by or against any of the Tenant Parties.

Waiver of Redemption, Statutory Notice and Grace Periods. Tenant does hereby waive and surrender all rights and privileges which it might have under or by reason of any present or future Legal Requirements to redeem the Premises or to have a continuance of this Lease for the Term hereby demised after being dispossessed or ejected therefrom by process of law or under the terms of this Lease or after the termination of this Lease as herein provided. Except to the extent prohibited by Legal Requirements, any statutory notice and grace periods provided to Tenant by law are hereby expressly waived by Tenant.

Landlord's Remedies Not Exclusive. The specified remedies to which Landlord may resort hereunder are cumulative and are not intended to be exclusive of any remedies or means of redress to which Landlord may at any time be lawfully entitled, and Landlord may invoke any remedy (including the remedy of specific performance) allowed at law or in equity as if specific remedies were not herein provided for.

No Waiver. Landlord's failure to seek redress for violation, or to insist upon the strict performance, of any covenant or condition of this Lease, or any of the Rules and Regulations promulgated hereunder, shall not prevent a subsequent act, which would have originally constituted a violation, from having all the force and effect of an original violation. The receipt by Landlord of Rent with knowledge of the breach of any covenant of this Lease shall not be deemed a waiver of such breach. The failure of Landlord to enforce any of such Rules and Regulations against Tenant and/or any other tenant in the Building shall not be deemed a waiver of any such Rules and Regulations. No provisions of this Lease shall be deemed to have been waived by either party unless such waiver be in writing signed by such party. No payment by Tenant or receipt by Landlord of a lesser amount than the Rent herein stipulated shall be deemed to be other than on account of the stipulated Rent, nor shall any endorsement or statement on any check or any letter accompanying any check or payment as Rent be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such Rent or pursue any other remedy in this Lease provided.

Restrictions on Tenant's Rights. During the continuation of any Event of Default, (a) Landlord shall not be obligated to provide Tenant with any notice pursuant to Sections 2.3 and 2.4 above; and (b) Tenant shall not have the right to make, nor to request Landlord's consent or approval with respect to, any Alterations.

Landlord Default. Notwithstanding anything to the contrary contained in the Lease, Landlord shall in no event be in default in the performance of any of Landlord's obligations under this Lease unless Landlord shall have failed to perform such obligations within thirty (30) days (or such additional time as is reasonably required to correct any such default, provided Landlord commences cure within 30 days) after notice by Tenant to Landlord properly specifying wherein Landlord has failed to perform any such obligation. Except as expressly set forth in this Lease, Tenant shall not have the right to terminate or cancel this Lease or to withhold rent or to set-off or deduct any claim or damages against rent as a result of any default by Landlord or breach by Landlord of its covenants or any warranties or promises hereunder, except in the case of a wrongful eviction of Tenant from the Premises (constructive or actual) by Landlord, and then only if the same continues after notice to Landlord thereof and an opportunity for Landlord to cure the same as set forth above. In addition, Tenant shall not assert any right to deduct the cost of repairs or any monetary claim against Landlord from rent thereafter due and payable under this Lease.

SURRENDER; ABANDONED PROPERTY; HOLD-OVER.

1.6 Surrender

(a) Upon the expiration or earlier termination of the Term, Tenant shall (i) peaceably quit and surrender to Landlord the Premises (including without limitation all lab benches, fume hoods, electric, plumbing, heating and sprinkling systems, fixtures and outlets, vaults, paneling, molding, shelving, radiator enclosures, cork, rubber, linoleum and composition floors, ventilating, silencing, air conditioning and cooling equipment therein) broom clean, in good order, repair and condition excepting only ordinary wear and tear and damage by fire or other insured Casualty or loss by Taking; (ii) remove all of Tenant's Property, all autoclaves and cage washers and, to the extent specified by Landlord in accordance with Section 11 above, Alterations made by Tenant; and (iii) repair any damages to the Premises or the Building caused by the installation or removal of Tenant's Property and/or such Alterations. Tenant's obligations under this Section 21.1(a) shall survive the expiration or earlier termination of this Lease. Notwithstanding any other provision of this Lease to the contrary, Tenant shall have the right to remove any wall-mounted IT panels, lab benches, autoclaves, glass washers, recirculated tissue culture hoods and centrifuges installed by or on behalf of Tenant to the extent such items were not (A) paid for in whole or in part by Landlord or (B) installed as part of Landlord's Work.

(b) At least thirty (30) days prior to the expiration of the Term (or, if applicable, within five (5) business days after any earlier termination of this Lease), Tenant shall deliver to Landlord a narrative description of the actions proposed (or required by any Legal Requirements) to be taken by Tenant in order to render the Premises (including, without limitation, floors, walls, ceilings, counters, piping, supply lines, waste lines and plumbing in or serving the Premises and all exhaust or other ductwork in or serving the Premises) free of Hazardous Materials other than Third Party Hazardous Materials⁵ and otherwise released for unrestricted use and occupancy (the "**Surrender Plan**"). The Surrender Plan (i) shall be accompanied by a current list of (A) all local, state and federal licenses, permits and approvals held by or on behalf of any Tenant Party with respect to Hazardous Materials in, on, under, at or about the Premises, and (B) Tenant's Hazardous Materials, and (ii) shall be subject to the review and approval of Landlord's environmental consultant. In connection with review and approval of the Surrender Plan, upon request of Landlord, Tenant shall deliver to Landlord or its consultant such additional non-proprietary information concerning the use of and operations within the Premises as

⁵ For purposes hereof, "**Third Party Hazardous Materials**" means Hazardous Materials, the presence of which Tenant demonstrates to Landlord's reasonable satisfaction results from the acts or omissions of third parties unrelated to the Tenant Parties after May 29, 2014 (the date of the decommissioning report prepared on behalf of the prior occupant).

Landlord shall reasonably request. On or before the expiration of the Term or within thirty (30) days after any earlier termination of this Lease (during which period Tenant's use and occupancy of the Premises shall be governed by Section 21.3 below unless such termination is due to a Casualty or Taking), Tenant shall (i) perform or cause to be performed all actions described in the approved Surrender Plan, and (ii) deliver to Landlord a certification from a certified industrial hygienist reasonably acceptable to Landlord certifying that the Premises do not contain any Hazardous Materials other than Third Party Hazardous Materials and evidence that the approved Surrender Plan shall have been satisfactorily completed by a contractor acceptable to Landlord (the "**Surrender Report**"), and Landlord shall have the right, subject to reimbursement at Tenant's expense as set forth below, to cause Landlord's environmental consultant to inspect the Premises and perform such additional procedures as may be deemed reasonably necessary to confirm that the Premises are, as of the expiration of the Term (or, if applicable, the date which is thirty (30) days after any earlier termination of this Lease), free of Hazardous Materials other than Third Party Hazardous Materials and otherwise available for unrestricted use and occupancy. Landlord shall have the unrestricted right to deliver the Surrender Plan, the Surrender Report and any report by Landlord's environmental consultant with respect to the surrender of the Premises to third parties, and such third parties and the Landlord Parties shall be entitled to rely thereon. If Tenant shall fail to prepare or submit a Surrender Plan approved by Landlord, or if Tenant shall fail to complete the approved Surrender Plan, or if such Surrender Plan, whether or not approved by Landlord, shall fail to adequately address the use of Hazardous Materials by any of the Tenant Parties in, on, at, under or about the Premises, (A) Landlord shall have the right to take any such actions as Landlord may deem reasonable or appropriate to assure that the Premises and the Property are surrendered in the condition required hereunder, the cost of which actions shall be reimbursed by Tenant as Additional Rent upon demand; and (B) if the Term shall have ended, unless and until Landlord elects to take such actions to assure that the Premises are surrendered in the condition required hereunder, Tenant shall be deemed to be a holdover tenant subject to the provisions of Section 21.3 below until the date on which Tenant delivers the Surrender Report (in the form required hereunder) to Landlord. Tenant's obligations under this Section 21.1(b) shall survive the expiration or earlier termination of the Term.

(c) No act or thing done by Landlord during the Term shall be deemed an acceptance of a surrender of the Premises, and no agreement to accept such surrender shall be valid, unless in writing signed by Landlord. Unless otherwise agreed by the parties in writing, no employee of Landlord or of Landlord's agents shall have any power to accept the keys of the Premises prior to the expiration or earlier termination of this Lease. The delivery of keys to any employee of Landlord or of Landlord's agents shall not operate as a termination of this Lease or a surrender of the Premises.

(d) Notwithstanding anything to the contrary contained herein, Tenant shall, at its sole cost and expense, remove from the Premises, prior to the end of the Term, any item installed by or for Tenant and which, pursuant to Legal Requirements, must be removed therefrom before the Premises may be used by a subsequent tenant.

(e) Tenant hereby assigns to Landlord any warranties in effect on the last day of the Term with respect to any fixtures and Alterations installed in the Premises. Tenant shall provide Landlord with copies of any such warranties prior to the expiration of the Term (or, if the Lease is earlier terminated, within 5 days thereafter).

Abandoned Property. After the expiration or earlier termination hereof, if Tenant fails to remove any property from the Building or the Premises which Tenant is obligated by the terms of this Lease to remove within five (5) business days after written notice from Landlord, such property (the "**Abandoned Property**") shall be conclusively deemed to have been abandoned, and may either be retained by Landlord as its property or sold or otherwise disposed of in such manner as Landlord may see fit. If any item of Abandoned Property shall be sold, Tenant hereby agrees that Landlord may receive and retain the proceeds of such sale and apply the same, at its option, to the expenses of the sale, the cost of moving and storage, any damages to which Landlord may be entitled under Section 20 hereof or pursuant to law, and to any arrears of Rent.

Holdover. If any of the Tenant Parties holds over after the end of the Term, Tenant shall be deemed a tenant-at-sufferance subject to the provisions of this Lease; provided that whether or not Landlord has previously accepted payments of Rent from Tenant, (i) Tenant shall pay Base Rent at 150% of the highest rate of Base Rent payable during the Term, (ii) Tenant shall continue to pay to Landlord all additional rent, and (iii) if such holdover continues for more than thirty (30) days, Tenant shall be liable for all damages, including without limitation lost business and consequential damages, incurred by Landlord as a result of such holding over, Tenant hereby acknowledging that Landlord may need the Premises after the end of the Term for other tenants and that the damages which Landlord may suffer as the result of Tenant's holding over cannot be determined as of the Execution Date. Nothing contained herein shall grant Tenant the right to holdover after the expiration or earlier termination of the Term.

MORTGAGEE RIGHTS.

Subordination. Tenant's rights and interests under this Lease shall be (i) subject and subordinate to any ground lease (including without limitation the Ground Lease), and to any mortgages, deeds of trust, overleases, or similar instruments covering the Premises, the Building and/or the Land and to all advances, modifications, renewals, replacements, and extensions thereof (each of the foregoing, a "**Mortgage**"), or (ii) if any Mortgagee elects, prior to the lien of any present or future Mortgage. Tenant further shall attorn to and recognize any successor landlord, whether through foreclosure or otherwise, as if the successor landlord were the originally named landlord. The provisions of this Section 22.1 shall be self-operative and no further instrument shall be required to effect such subordination or attornment; however, Tenant agrees to execute, acknowledge and deliver such instruments, confirming such subordination and attornment in such form as shall be requested by any such holder within fifteen (15) days of request therefor. Landlord agrees to request that each Mortgagee execute a so-called subordination, non-disturbance and attornment agreement, using such Mortgagee's standard recordable form, provided that this sentence shall not apply so long as the fee owner of the Property is MIT 620 Memorial LLC, Massachusetts Institute of Technology or any entity controlled by Massachusetts Institute of Technology.

Notices. Tenant shall give each Mortgagee the same notices given to Landlord concurrently with the notice to Landlord, and each Mortgagee shall have a reasonable opportunity thereafter to cure a Landlord default, and Mortgagee's curing of any of Landlord's default shall be treated as performance by Landlord.

Mortgagee Liability. Tenant acknowledges and agrees that if any Mortgage shall be foreclosed, (a) the liability of the Mortgagee and its successors and assigns shall exist only so long as such Mortgagee or purchaser is the owner of the Premises, and such liability shall not continue or survive after further transfer of ownership; and (b) such Mortgagee and its successors or assigns shall not be (i) liable for any act or omission of any prior lessor under this Lease; (ii) liable for the performance of Landlord's covenants pursuant to the provisions of this Lease which arise and accrue prior to such entity succeeding to the interest of Landlord under this Lease or acquiring such right to possession; (iii) subject to any offsets or defense which Tenant may have at any time against Landlord; (iv) bound by any base rent or other sum which Tenant may have paid previously for more than one (1) month; or (v) liable for the performance of any covenant of Landlord under this Lease which is capable of performance only by the original Landlord.

QUIET ENJOYMENT. Landlord covenants that so long as Tenant keeps and performs each and every covenant, agreement, term, provision and condition herein contained on the part and on behalf of Tenant to be kept and performed, Tenant shall peaceably and quietly hold, occupy and enjoy the Premises during the Term from and against the claims of all persons lawfully claiming by, through or under Landlord subject, nevertheless, to the covenants, agreements, terms, provisions and conditions of this Lease, any matters of record or of which Tenant has knowledge and to any Mortgage to which this Lease is subject and subordinate, as hereinabove set forth.

NOTICES. Any notice, consent, request, bill, demand or statement hereunder (each, a “**Notice**”) by either party to the other party shall be in writing and shall be deemed to have been duly given when either delivered by hand or by nationally recognized overnight courier (in either case with evidence of delivery or refusal thereof) addressed as follows:

If to Landlord:	620 Memorial Leasehold LLC c/o MIT Investment Management Company 238 Main Street, Suite 200 Cambridge, MA 02142 Attention: Steven C. Marsh
With copies to:	Goulston & Storrs 400 Atlantic Avenue Boston, MA 02110 Attention: Colleen P. Hussey, Esquire
and	Colliers International 336 Main Street Cambridge, MA 02142 Attention: Kristina Descoteaux
if to Tenant:	Evelo Therapeutics, Inc. c/o Flagship Ventures One Memorial Drive, 7th Floor Cambridge, MA 02142
With copies to:	WilmerHale LLP 60 State Street Boston, MA 02109 Attention: William R. O’Reilly, Jr., Esquire

Notwithstanding the foregoing, any notice from Landlord to Tenant regarding ordinary business operations (e.g., exercise of a right of access to the Premises, maintenance activities, invoices, etc.) may also be given by written notice delivered by facsimile to any person at the Premises whom Landlord reasonably believes is authorized to receive such notice on behalf of Tenant without copies as specified above, provided that no such notice shall be relied upon for purposes of determining the running of any periods with respect to any Event of Default hereunder. Either party may at any time change the address or specify an additional address for such Notices by delivering or mailing, as aforesaid, to the other party a notice stating the change and setting forth the changed or additional address, provided such changed or additional address is within the United States. Notices shall be effective upon the date of receipt or refusal thereof.

MISCELLANEOUS.

Separability. If any provision of this Lease or portion of such provision or the application thereof to any person or circumstance is for any reason held invalid or unenforceable, the remainder of this Lease (or the remainder of such provision) and the application thereof to other persons or circumstances shall not be affected thereby.

Captions. The captions are inserted only as a matter of convenience and for reference, and in no way define, limit or describe the scope of this Lease or the intent of any provisions thereof.

Broker. Tenant and Landlord each warrants and represents that it has dealt with no broker in connection with the consummation of this Lease other than Cushman & Wakefield (“**Broker**”). Tenant and Landlord each agrees to defend, indemnify and save the other harmless from and against any Claims arising in breach of the representation and warranty set forth in the immediately preceding sentence. Landlord shall be solely responsible for the payment of any brokerage commissions to Broker.

Entire Agreement. This Lease, Lease Summary Sheet and Exhibits 1-8 attached hereto and incorporated herein contain the entire and only agreement between the parties and any and all statements and representations, written and oral, including previous correspondence and agreements between the parties hereto, are merged herein. Tenant acknowledges that all representations and statements upon which it relied in executing this Lease are contained herein and that Tenant in no way relied upon any other statements or representations, written or oral. This Lease may not be modified orally or in any manner other than by written agreement signed by the parties hereto.

Governing Law. This Lease is made pursuant to, and shall be governed by, and construed in accordance with, the laws of the Commonwealth of Massachusetts and any applicable local municipal rules, regulations, by-laws, ordinances and the like.

Representation of Authority. By his or her execution hereof, each of the signatories on behalf of the respective parties hereby warrants and represents to the other that he or she is duly authorized to execute this Lease on behalf of such party. Upon Landlord’s request, Tenant shall provide Landlord with evidence that any requisite resolution, corporate authority and any other necessary consents have been duly adopted and obtained.

Expenses Incurred by Landlord Upon Tenant Requests. Tenant shall, upon demand, reimburse Landlord for all reasonable expenses, including, without limitation, legal fees, incurred by Landlord in connection with all requests by Tenant for consents, approvals or execution of collateral documentation related to this Lease, including, without limitation, costs incurred by Landlord in the review and approval of Tenant’s plans and specifications in connection with proposed Alterations to be made by Tenant to the Premises or in connection with requests by Tenant for Landlord’s consent to make a Transfer. Such costs shall be deemed to be additional rent under this Lease.

Survival. Without limiting any other obligation of Tenant which may survive the expiration or prior termination of the Term, all obligations on the part of Tenant to indemnify, defend, or hold Landlord harmless, as set forth in this Lease shall survive the expiration or prior termination of the Term.

Limitation of Liability. Tenant shall neither assert nor seek to enforce any claim against Landlord or any of the Landlord Parties, or the assets of any of the Landlord Parties, for breach of this Lease or otherwise, other than against Landlord’s interest in the Building and in the uncollected rents, issues and profits thereof, and Tenant agrees to look solely to such interest for the satisfaction of any liability of Landlord under this Lease. This Section 25.9 shall not limit any right that Tenant might otherwise have to obtain injunctive relief against Landlord. **Landlord and Tenant specifically agree that in no event shall any officer, director, trustee, employee or representative of Landlord or any**

of the other Landlord Parties ever be personally liable for any obligation under this Lease, nor shall Landlord or any of the other Landlord Parties be liable for consequential or incidental damages or for lost profits whatsoever in connection with this Lease, nor shall Tenant or any other Tenant Party or any officer, director, shareholder, trustee, employee, agent or representative of any of them be liable for consequential or incidental damages or for lost profits whatsoever in connection with this Lease except with respect to the potential liability of Tenant under Sections 17 or 21.3 hereof.

Binding Effect. The covenants, agreements, terms, provisions and conditions of this Lease shall bind and benefit the successors and assigns of the parties hereto with the same effect as if mentioned in each instance where a party hereto is named or referred to, except that no violation of the provisions of Section 13 hereof shall operate to vest any rights in any successor or assignee of Tenant.

Landlord Obligations upon Transfer. Upon any sale, transfer or other disposition of the Building, Landlord shall be entirely freed and relieved from the performance and observance thereafter of all covenants and obligations hereunder on the part of Landlord to be performed and observed, it being understood and agreed in such event (and it shall be deemed and construed as a covenant running with the land) that the person succeeding to Landlord's ownership of said reversionary interest shall thereupon and thereafter assume, and perform and observe, any and all of such covenants and obligations of Landlord, except as otherwise agreed in writing.

No Grant of Interest. Tenant shall not grant any security interest whatsoever in (a) any fixtures within the Premises or (b) any item paid in whole or in part by Landlord without the consent of Landlord.

1.7 No Air Rights. No rights to any view or to light or air over any property, whether belonging to Landlord or any other person, are granted to Tenant by this Lease. If at any time any windows of the Premises are temporarily darkened or the light therefrom is obstructed by reason of any repairs, improvements, maintenance or cleaning in or about the Property, the same shall be without liability to Landlord and without any reduction or diminution of Tenant's obligations under this Lease.

1.8 Financial Information. Tenant shall deliver to Landlord, within thirty (30) days after Landlord's reasonable request, Tenant's most recently completed balance sheet and related statements of income, shareholder's equity and cash flows statements (audited if available) certified by an officer of Tenant as being true and correct in all material respects. Any such financial information may be relied upon by any actual or potential lessor, purchaser, or mortgagee of the Property or any portion thereof.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF the parties hereto have executed this Lease as a sealed instrument as of the Execution Date.

LANDLORD

620 MEMORIAL LEASEHOLD LLC

By: /s/ Seth Alexander

Name: Seth Alexander

Title: President, MIT Investment Management Company

TENANT

EVELO THERAPEUTICS, INC.

By: /s/ David A. Berry

Name: David Berry

Title: President

EXHIBIT 1

LEASE PLAN

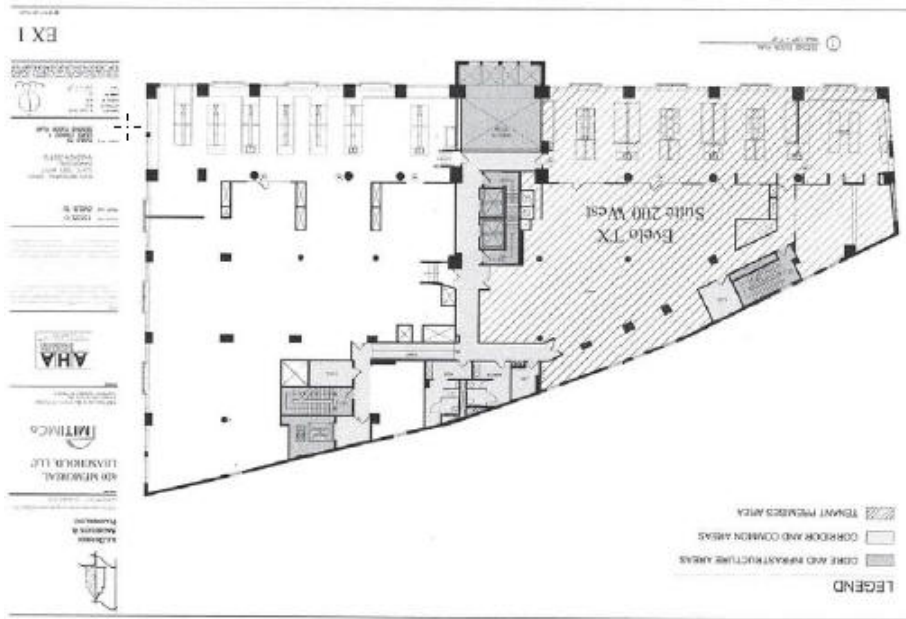


EXHIBIT 1, PAGE 1

LEGAL DESCRIPTION

Parcel 1:

The land with the buildings thereon in Cambridge, Middlesex County, Massachusetts situated on the northerly side of Memorial Drive and the westerly side of Vassar Street, now known as and numbered 620 Memorial Drive, and shown as the parcel marked “AREA = 44,677 +1- SF” on a plan entitled “Plan of Land in Cambridge, MA Middlesex County”, prepared by Beals and Thomas, Inc., dated January 28, 1994 recorded with the Middlesex South Deeds on February 17, 1994 as Plan No. 134 of 1994 and bounded and described according to said plan as follows:

SOUTHERLY	by Memorial Drive by two curved lines, measuring respectively, 4.62 feet and 196.73 feet;
WESTERLY	by land now or formerly of Massachusetts Institute of Technology LC No. 2495C, 143.97 feet;
NORTHWESTERLY and NORTHERLY	by the southeasterly and southerly lines of a strip of land marked “Railroad Way” on said plan, four lines, the third of which is a curved line, measuring respectively 30.28 feet, 66.70 feet, 105.51 feet and 70.51 feet;
SOUTHEASTERLY and EASTERLY	by Vassar Street and by two lines, the first of which is a curved line, measuring respectively, 84.20 feet and 148.20 feet; and
SOUTHEASTERLY	by the intersection of Vassar Street and Memorial Drive by a curved line, 23.50 feet.

Together with the benefit of and subject to the terms of, a Grant of Easement from the City of Cambridge to Charles River Building Limited Partnership dated January 9, 1997, and recorded on January 17, 1997, as Instrument No. 268 in Book 26997, Page 351.

Parcel 2:

A parcel of land on Memorial Drive, formerly Charles River Parkway, in Cambridge, Middlesex County, Massachusetts, shown as Lot 3 on a plan entitled “Subdivision Plan of Land in Cambridge” by W.T. Fairclough, dated June 23, 1953, filed for registration with the Middlesex County South Registry District of the Land Court as Plan No., 2495C with Certificate of Title No. 78992, bounded and described as follows:

NORTHWESTERLY	by Lot 2 on said plan, 183.78 feet;
EASTERLY:	by land formerly of Benjamin F. Brown et al, 143.97 feet; and
SOUTHERLY:	by Memorial Drive (Charles River Road as shown on said plan) 139.13 feet.

EXHIBIT 3

SCHEMATIC PLANS FOR LANDLORD'S WORK

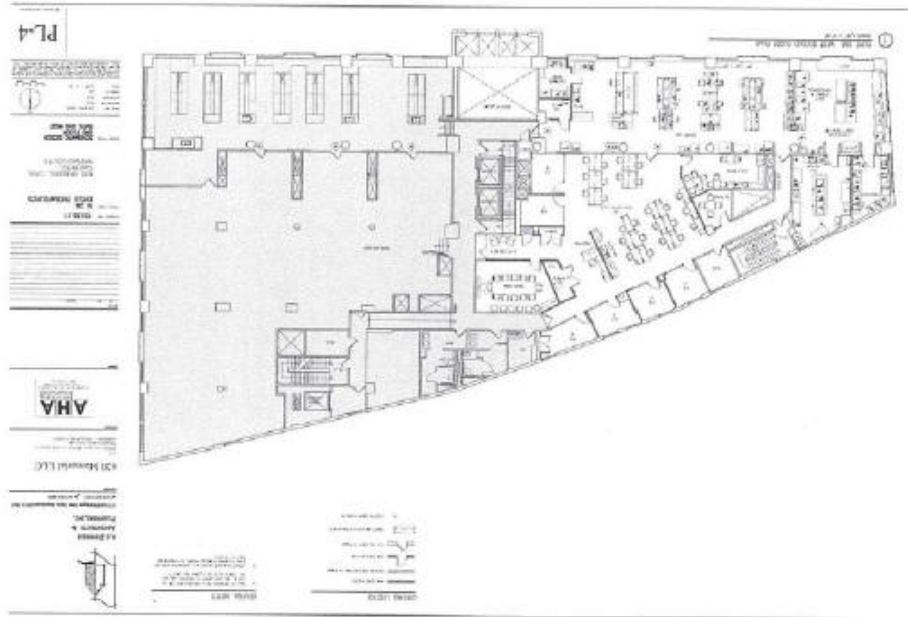


EXHIBIT 4

FORM OF LETTER OF CREDIT

BENEFICIARY:

ISSUANCE DATE:

< >
[LANDLORD]

IRREVOCABLE STANDBY
LETTER OF CREDIT NO.

ACCOMPLISHER/APPLICANT:

MAXIMUM/AGGREGATE
CREDIT AMOUNT:
USD: \$_____.__

< >
[TENANT]

LADIES AND GENTLEMEN:

We hereby establish our irrevocable letter of credit in your favor for account of the applicant up to an aggregate amount not to exceed _____ and _____/100 US Dollars (\$ _____) available by your draft(s) drawn on ourselves at sight (i) bearing the clause "Drawn under Irrevocable Standby Letter of Credit Number _____," and (ii) including a Beneficiary's dated statement purportedly signed by an authorized signatory or agent reading: "This draw in the amount of _____ U.S. Dollars (\$ _____) under your Irrevocable Standby Letter of Credit No. _____ represents funds due and owing to us pursuant to the terms of that certain lease by and between _____, a _____, as landlord, and _____, as tenant (the "Lease"), and/or any amendment to the Lease or any other agreement between such parties related to the Lease," and (iii) indicating whether payment should be made by wire transfer (including wiring instructions) or by certified check (including mailing address), accompanied by the original of this Letter of Credit and all amendments, if any. The original Letter of Credit and all amendments, if any, shall be returned to you unless fully utilized.

Unless otherwise stated, all correspondence, documents and sight drafts are to be sent via facsimile to (_____) - _____ with originals to follow by hand delivery with receipted delivery, nationally recognized overnight courier with receipted delivery or certified mail, return receipt requested to our counters at _____ <address>. The date of presentment of any draw shall be the date copies of the Letter of Credit and sight draft are faxed by Beneficiary to _____ <bank>.

You shall have the right to make partial draws against this Letter of Credit, from time to time.

You shall be entitled to assign your interest in this Irrevocable Standby Letter of Credit from time to time to your lender(s) and/or your successors in interest without our approval and without charge. In the event of an assignment, we reserve the right to require reasonable evidence of such assignment as a condition to any draw hereunder.

Except as otherwise expressly stated herein, this Letter of Credit is subject to the "International Standby Practices 1998" promulgated jointly by the Institute for International Banking Law and Practice and the International Chamber of Commerce, effective January 1, 1999.

This Letter of Credit shall expire at our office on _____, 20____ (the "**Stated Expiration Date**"). It is a condition of this Letter of Credit that the Stated Expiration Date shall be deemed automatically extended without amendment for successive one (1) year periods from such Stated Expiration Date, unless at least sixty (60) days prior to such Stated Expiration Date (or any anniversary thereof) we shall send a written notice to you, with a copy to Goulston & Storrs, 400 Atlantic Avenue, Boston, MA 02110, Attention: Colleen P. Hussey and to the Accountee/Applicant, by hand delivery, nationally recognized overnight courier with receipted delivery or by certified mail (return receipt requested) that we elect not to consider this Letter of Credit extended for any such additional one (1) year period. In the event that this Letter of Credit is not extended for an additional period as provided above, you may draw the entire amount available hereunder.

If at any time prior to presentation of documents for payment hereunder, we receive a notarized certificate signed by one who purports to be a duly authorized representative on your behalf to execute and deliver such certificate, stating that this Letter of Credit has been lost, stolen, damaged or destroyed, we will mail you a "Certified True Copy" of this Letter of Credit, which shall be treated by us as an original.

In order to cancel this Letter of Credit prior to expiration, you must return this original Letter of Credit and any amendments hereto to our counters with a statement signed by you stating that the Letter of Credit is no longer required and is being returned to the issuing bank for cancellation. In addition, this Letter of Credit may be canceled prior to expiration upon our receipt of a dated statement purportedly signed by (i) an authorized signatory or agent of the Accountee/Applicant and (ii) an authorized signatory or agent of the beneficiary.

We hereby agree with the drawers, endorsers and bonafide holders that the drafts drawn under and in accordance with the terms and condition of this Letter of Credit shall be duly honored within two (2) business days after the date of presentment.

ALTERATIONS CHECKLIST

Scope letter describing project, design/construction team, and appropriate vendors.

Insurance certificate(s) for Contractors.

Construction Documents (CDs) - Plans and Specifications - stamped by licensed AIA.

Code Review by licensed code engineer incorporated in CDs and/or by stamped letter.

Code specific - accessibility.

Code specific - egress paths/exits (numbers, locations, distance).

Code specific - fire protection, sprinkler distribution, horns/strobes/signage locations.

Landlord Approved architect, MEPFP engineer, code engineer, structural engineer.

Building permit application.

Signatures by Architect, Licensed Construction Supervisor.

Cost Affidavit with backup estimate from contractor.

Architect Affidavit.

MEP Affidavit.

FP Affidavit.

Structural Affidavit.

Construction Cost Affidavit.

Structural Affidavit.

Structural Affidavit.

Low Voltage Wiring Within Premises:

Insurance certificate(s) for Contractor, if applicable

If installer is employee, copy of valid government issued electrical license

Code Review by licensed code engineer

permit application as requested by Inspectional Services Department.

Signature by Licensed Professional (electrician)

Ethernet wiring within Premises:

Insurance certificate(s) for Contractor, if applicable

If installer is employee, copy of valid government issued electrical license (to the extent legally required)

Code Review by licensed code engineer

permit application as requested by Inspectional Services Department.

Signature by Licensed Professional (electrician) to the extent legally required

TENANT'S HAZARDOUS MATERIALS

Bio-Waste

Sharps

- Razor blades, syringes, lancets, specimen tubes

Solid Waste

- Culture dishes and flasks
- Pipettes, pipette tips
- Petri dishes
- Solid waste cultures
- Gloves
- Masks

Liquids

- Human and animal blood and tissue
- Human and animal cell tissue culture biomass and liquid growth media
- Bacterial fermentations containing known human pathogens at BL2 classification (U.S. Public Health Service guidelines)

Chemical Waste

Flammable Liquids

- Ethanol (4 L)
- Isopropanol (4 L)
- Acetonitrile (2 L)

Corrosives

- Hydrochloric acid (2 L)
- Sulfuric acid (2 L)
- Formic acid (2 L)
- Sodium hydroxide (1 L)

Toxics

- Chloroform (2 L)
- Phenol (2 L)
- Sodium Azide (10 g)

Other

- Phosphate buffered saline (10 L)
- Sodium chloride (1 Kg)
- Potassium chloride (1 Kg)
- Magnesium chloride (1 Kg)
- Ethidium bromide (1 g)
- Tris (1 Kg)
- Glycerol (1 L)
- Glucose (1 Kg)
- Galactose (1 Kg)

RULES AND REGULATIONS

To the extent of any conflict between these Rules and Regulations and the body of the Lease, the body of the Lease shall govern.

1. Tenant and its employees shall not in any way obstruct the sidewalks, halls, stairways, or elevators of the Building, and shall use the same only as a means of passage to and from their respective offices.
2. Corridor doors, when not in use, shall be kept closed.
3. No animals, except seeing eye dogs, shall be brought into or kept in, on or about the Premises.
4. The restroom fixtures shall be used only for the purpose for which they were constructed and no rubbish, ashes, or other substances of any kind shall be thrown into them. Tenant will bear the expense of any damage resulting from misuse.
5. Tenant shall not place any additional lock or locks on any exterior door in the Building or on any door in the Building core within the Premises, including doors providing access to the telephone and electric closets and the slop sink, without Landlord's prior written consent; provided, however, that Tenant shall have control of all keys to doors within the Premises, but will provide Landlord with a master copy of same. At Landlord's option, all keys shall be surrendered to Landlord at the expiration or earlier termination of the Lease.
6. Landlord reserves the right to exclude or expel from the Building any persons who, in the judgment of Landlord, is intoxicated under the influence of liquor or drugs, or shall do any act in violation of the rules and regulations of the Building.
7. Landlord reserves the right to close and keep locked all entrance and exit doors of the Building during the hours Landlord may deem advisable for the adequate protection of the property. Use of the Building and the leased Premises before 8 AM or after 6 PM, or any time during Sundays or legal holidays shall be allowed only to persons with a key/card key to the Premises or guests accompanied by such persons. At these times, all occupants and their guests must sign in at the concierge when entering and exiting the Building. Any persons found in the Building after hours without such keys/card keys are subject to the surveillance of building staff.
8. Tenant shall not, without the prior written consent of Landlord (which consent will not be unreasonably withheld, conditioned or delayed), perform improvements or alterations within the Building or the Premises if the work has the potential of disturbing the fireproofing which has been applied on the surfaces of the structural deck.
9. Landlord and Tenant shall mutually agree on the termite and pest extermination service to control termites and pests in the Premises. Except as included in Landlord's services, tenants shall bear the cost and expense of such extermination services.
10. Tenant shall not install, operate or maintain in the Premises or in any other area of the Building, any electrical equipment which does not bear the U/L (Underwriters Laboratories) or IEC (International Electrotechnical Conference) seal of approval, or which would overload the electrical system or any part thereof beyond its capacity for proper, efficient and safe operation as reasonably determined by Landlord, taking into consideration the overall electrical system, the capacities reserved to Tenant in

the Lease, and the present and future requirements therefor in the Building. Tenant shall not use more than Tenant's Building Share of telephone lines available to service the Building, unless Tenant provides its own conduits and service at its sole expense. Landlord shall notify Tenant, at the time of Landlord's review and approval of the plans for Tenant's Work or for any future Alterations, if any work set forth therein will result in the use of more than Tenant's Building Share of telephone lines.

11. Tenant shall not operate or permit to be operated on the Premises any coin or token operated vending machine or similar device (including, without limitation, telephones, lockers, toilets, scales, amusement devices and machines for sale of beverages food, candy, cigarettes or other goods), except for those vending machines or similar devices which are for the sole and exclusive use of Tenant's employees.
12. Bicycles and other vehicles are not permitted inside or on the walkways outside the Building, except in those areas specifically designated by Landlord for such purposes.
13. Landlord may from time to time adopt appropriate systems and procedures for the security or safety of the Building, its occupants, entry and use, or its contents, provided that Tenant shall have access to the Building 24 hours per day, 7 days a week, 365 days a year. Tenant, Tenant's agents, employees, contractors, guests and invitees shall comply with Landlord's reasonable requirements relative thereto.
14. Canvassing, soliciting, and peddling in or about the Building is prohibited. Tenant shall cooperate and use reasonable efforts to prevent the same.
15. At no time shall Tenant permit or shall Tenant's agents, employees, contractors, guests, or invitees smoke in any Common Area of the Building.
16. Tenant shall, at its sole cost and expense, keep any garbage, trash, rubbish and refuse in vermin-proof containers within the interior of the Premises until removed.
17. Landlord and Tenant shall mutually agree on those areas where lab coats are not allowed.
18. Lab operators carrying any lab related materials may only travel in Tenant's freight elevator or stairwells within the Premises. If such freight elevator is down, announcements will be sent from Landlord's property manager designating use of another elevator. At no time should any lab materials travel in passenger elevators.
19. Any dry ice brought into the Building must be delivered through Tenant's freight elevator only.
20. All nitrogen tanks must travel in Tenant's freight elevator and should never be left unmanned outside of the Premises

LANDLORD'S SERVICES

- On-site bicycle parking
- Shower facilities in the Building
- To the extent capacity is available beyond base Building requirements (such available capacity, "**Lessee Capacity**"), Landlord's sole obligation for either providing emergency generators or providing emergency back-up power to Tenant shall be to: (i) provide an emergency generator for use of one or more tenants in the Building, including Tenant (the "**Back-up Generator**") with Tenant's Share of the Lessee Capacity (Tenant hereby acknowledging that Tenant's equipment to be connected to the Back-Up Generator collectively shall use no more than Tenant's Share of the Lessee Capacity), and (ii) maintain the Back-up Generator as per the manufacturer's standard maintenance guidelines. In the event that Tenant's equipment connected to the Back-Up Generator uses more than Tenant's Share of the Lessee Capacity, Tenant shall, upon Landlord's demand, disconnect from the Back-Up Generator such equipment as may be necessary to reduce Tenant's use to equal or be less than Tenant's Share of the Lessee Capacity. Landlord shall provide reasonable prior notice of any planned period of replacement, repair or maintenance of the Back-up Generator and within one (1) business day after Landlord learns that the Back-up Generator is not operational, however Landlord shall have no obligation to provide Tenant with an alternative back-up generator or alternative sources of back-up power. Tenant expressly acknowledges and agrees that Landlord does not guaranty that the Back-up Generator will be operational at all times or that emergency power will be available to the Premises when needed. So long as Landlord is not in default of its obligations under this paragraph, in no event shall Landlord be liable to Tenant or any other party for any damages of any type suffered by Tenant or any other person in the event that any emergency generator or back-up power or any replacement thereof fails or does not provide sufficient power.

FIRST AMENDMENT TO LEASE

This First Amendment to Lease (this "**First Amendment**") is made as of January 24, 2018 by and between 620 MEMORIAL LEASEHOLD LLC, a Massachusetts limited liability company with an address c/o MIT Investment Management Company, 238 Main Street, Suite 200, Cambridge, MA 02142 ("**Landlord**"), and EVELO BIOSCIENCES, INC., a Delaware corporation with an address of 620 Memorial Drive, Cambridge, MA 02139 ("**Tenant**").

W I T N E S S E T H

WHEREAS, Landlord and Tenant are the current parties to that certain Lease dated July 14, 2015, as affected by that certain letter regarding square footage dated February 22, 2016 and as further affected by that certain letter agreement regarding dates dated May 15, 2016 (collectively and as amended hereby, the "**Lease**"), pursuant to which Landlord is leasing to Tenant approximately 9,132 rentable square feet (as more particularly described in the Lease, the "**Premises**") located on the second (2nd) floor of the building located at 620 Memorial Drive, Cambridge, MA (the "**Building**"); and

WHEREAS, pursuant to that certain Consent to Sublease dated on or about the date hereof (the "**Consent**"), Landlord has consented to a sublease for other space in the Building naming Tenant as subtenant (the "**Sublease**"); and

WHEREAS, Landlord and Tenant have agreed to amend the Lease as hereinafter set forth.

NOW, THEREFORE, in consideration of Landlord's execution of the Consent, the covenants herein reserved and contained, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. **Recitals; Capitalized Terms.** The foregoing recitals are hereby incorporated by reference. All capitalized terms not otherwise defined herein shall have the meanings ascribed to them as set forth in the Lease.
2. **Termination.** The Lease shall terminate upon the earlier to occur of (a) the date which is sixty (60) days after Landlord's receipt of written notice from Tenant terminating the Lease pursuant to this **Section 2**, or (b) the Outside Termination Date, as hereinafter defined (such earlier date, the "**Termination Date**"). The "**Outside Termination Date**" shall mean June 30, 2018; **provided, however,** if Landlord fails to respond to Tenant's request for Landlord's approval of any Alterations to the space subject to the Sublease within ten (10) business days after Landlord's receipt of (a) evidence that such Alterations have been approved by Tenant's sublandlord, and (b) all information required by the Primary Lease (as such term is defined in the Sublease) to be submitted in connection with such Alterations, then the Outside Termination Date shall be delayed on a day for day basis for each day beyond such 10-business day period until Landlord does so respond.

3. Holdover. Section 21.3 of the Lease is hereby deleted in its entirety and replaced with the following: “

21.3 Holdover. Notwithstanding anything set forth in the Lease to the contrary, if any of the Tenant Parties fails to vacate and surrender the Premises as provided in the Lease on or before the Termination Date, Tenant shall be deemed a tenant-at-sufferance subject to the provisions of this Lease; provided that whether or not Landlord has previously accepted payments of Rent from Tenant, (i) during any holdover period (i.e., *the period commencing on the day immediately after the Termination Date and ending on the date Tenant vacates and surrenders the Premises as provided in the Lease*), Tenant shall pay Base Rent at 200% of the highest rate of Base Rent payable during the Term, (ii) during any holdover period, Tenant shall continue to pay to Landlord all additional rent, and (iii) if, as a result of such holdover, the Premises cannot be delivered to any new tenant who has signed a lease for the same or any such new tenant does not accept delivery of the Premises, then Tenant shall pay to Landlord, as liquidated damages, within fifteen (15) days after receipt of demand therefor from time to time, an amount equal to \$1,851.77 per day for *the period of time commencing on the day immediately after Tenant vacates and surrenders the Premises as provided in the Lease and ending on the earlier to occur of (x) December 31, 2020, and (y) the term commencement date for a subsequent new lease for the Premises* (Tenant hereby acknowledging that Landlord intends to lease the Premises for a term commencing on the day immediately after the Termination Date, and that the damages Landlord will suffer as the result of Tenant's holding over cannot be determined as of the date of this First Amendment). For clarification, upon commencement of liquidated damages paid pursuant to clause (iii) above, Tenant shall no longer be responsible for paying Base Rent or additional rent pursuant to clauses (i) and (ii) above. Nothing contained herein shall grant any of the Tenant Parties the right to holdover after the Termination Date. (The amounts payable pursuant to clause (iii) above are only applicable if Landlord has signed a new lease for the Premises.) If Tenant is obligated to make payments pursuant to clause (iii) above, Landlord shall use commercially reasonable efforts to relet the Premises, subject, however, to the reasonable requirements of Landlord to lease other available space for comparable use prior to reletting the Premises and to lease to high quality tenants in a harmonious manner with an appropriate mix of uses, tenants, floor areas and terms of tenancies, and the like.

4. Landlord's Right to Terminate this First Amendment. Landlord shall have the right, by written notice delivered to Tenant on or before February 28, 2018, to terminate this First Amendment without penalties, liabilities or costs, in which event this First Amendment shall be rendered null and void, and the Lease shall remain in full force and effect in accordance with its terms, unaffected by this First Amendment.

5. Brokers. Landlord and Tenant each warrants and represents that it has dealt with no broker in connection with this First Amendment. Landlord and Tenant each agrees to defend, indemnify and save the other harmless from and against any Claims arising as a result of its breach of the foregoing representation and warranty. Landlord shall be solely responsible for the payment of any brokerage commissions to Broker.

6. Authority. Tenant hereby guarantees, warrants and represents to Landlord that (i) Tenant is duly incorporated or otherwise established or formed and validly existing under the laws of its state of incorporation, establishment or formation, (ii) Tenant has and is duly qualified to do

business in the state in which the Property is located, (iii) Tenant has full corporate, partnership, trust, association or other appropriate power and authority to enter into this First Amendment and to perform all of Tenant's obligations hereunder, (iv) each person (and all of the persons if more than one signs) signing this First Amendment on behalf of Tenant is duly and validly authorized to do so; and (v) neither the execution, delivery or performance of this First Amendment, nor the consummation of the transactions contemplated hereby, will violate or conflict with any provision of documents or instruments under which Tenant is constituted or to which Tenant is a party.

7. Ratification. Except as amended hereby, the terms and conditions of the Lease shall remain unaffected. From and after the date hereof, all references to the Lease shall mean the Lease as amended hereby. Additionally, Landlord and Tenant each confirms and ratifies that, as of the date hereof and to its actual knowledge, (a) the Lease is and remains in good standing and in full force and effect, and (b) neither party has any claims, counterclaims, set-offs or defenses against the other party arising out of the Lease or the Premises or in any way relating thereto.

8. Miscellaneous. This First Amendment shall be deemed to have been executed and delivered within the Commonwealth of Massachusetts, and the rights and obligations of Landlord and Tenant hereunder shall be construed and enforced in accordance with, and governed by, the laws of the Commonwealth of Massachusetts without regard to the laws governing conflicts of laws. If any term of this First Amendment or the application thereof to any person or circumstances shall be invalid and unenforceable, the remaining provisions of this First Amendment, the application of such term to persons or circumstances other than those as to which it is invalid or unenforceable, shall not be affected. This First Amendment is binding upon and shall inure to the benefit of Landlord and Tenant and their respective successors and assigns. Each party has cooperated in the drafting and preparation of this First Amendment and, therefore, in any construction to be made of this First Amendment, the same shall not be construed against either party. In the event of litigation relating to this First Amendment, the prevailing party shall be entitled to reimbursement from the other party of its reasonable attorneys' fees and costs. This First Amendment constitutes the entire agreement of the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions, and may not be amended, waived, discharged or terminated except by a written instrument signed by all the parties hereto. A facsimile, PDF or other electronic signature on this First Amendment shall be equivalent to, and have the same force and effect as, an original signature.

[signatures on following page]

EXECUTED under seal as of the date first set forth above.

LANDLORD:

620 MEMORIAL LEASEHOLD LLC

By: MIT Cambridge Real Estate, LLC, its manager

By: /s/ Seth D. Alexander
Seth D. Alexander, President and not individually

TENANT:

EVELO BIOSCIENCES, INC.

By: /s/ Jennifer Glennon
Name: Jennifer Glennon
Title: Vice President, Finance and Operations
Hereunto duly authorized

SUBSIDIARIES OF EVELO BIOSCIENCES, INC.

<u>Legal Name of Subsidiary</u>	<u>Jurisdiction of Organization</u>
Evelo Biosciences Security Corporation	Massachusetts