Filed Pursuant to Rule 424(b)(4)
Registration No. 333-236256

PROSPECTUS

2,500,000 Shares

Common Stock

RAPT Therapeutics, Inc. is selling 2,500,000 shares of its common stock.

Our common stock is listed on the Nasdaq Global Market under the symbol "RAPT." The last reported sale price of our common stock on the Nasdaq Global Market on February 6, 2020 was $33.61 per share.

We are an "emerging growth company" as defined under the U.S. federal securities laws and, as such, may elect to comply with certain reduced public company reporting requirements for this and future filings. See "Prospectus Summary—Implications of Being an Emerging Growth Company."

Investing in our common stock involves risks that are described in the "Risk Factors" section beginning on page 12 of this prospectus.

	Per Share	Total
Public offering price	$ 30.00	$75,000,000
Underwriting discount(1)	$ 1.80	$ 4,500,000
Proceeds, before expenses, to us	$ 28.20	$70,500,000

(1) See "Underwriting" beginning on page 182 for additional information regarding underwriting compensation.

The underwriters may also exercise their option to purchase up to an additional 375,000 shares of common stock from us, at the public offering price, less the underwriting discount, for 30 days after the date of this prospectus.

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

The shares of common stock will be ready for delivery on or about February 11, 2020.

BMO Capital Markets **Wells Fargo Securities** **UBS Investment Bank** **Cantor**

The date of this prospectus is February 6, 2020

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Prospectus

We have not and the underwriters have not authorized anyone to provide you with any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses we have prepared. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock. Our business, financial condition, results of operations and future growth prospects may have changed since that date.

For investors outside the United States: Neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside of 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 our common stock and the distribution of this prospectus outside of the United States.

PROSPECTUS SUMMARY

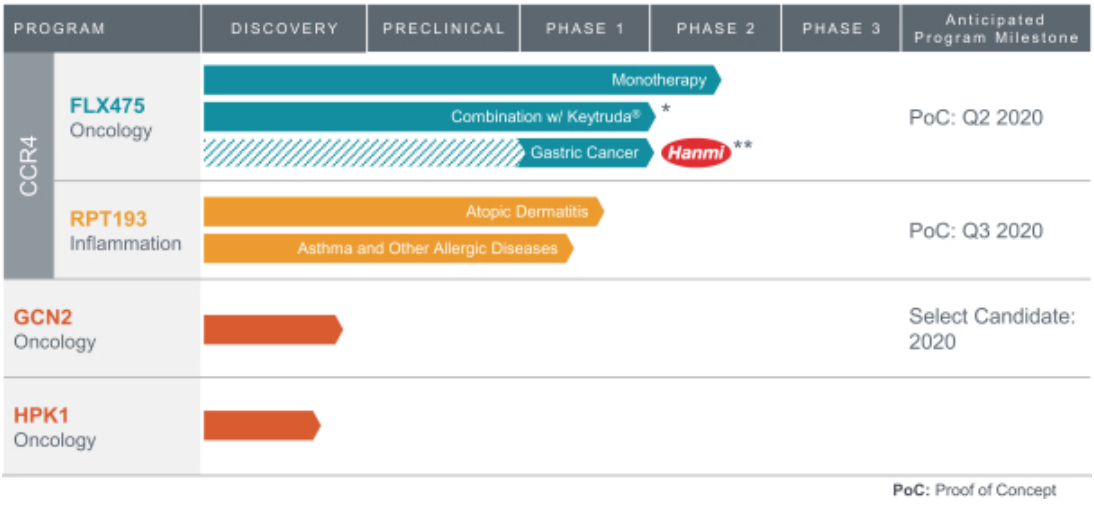
This summary highlights selected information, presented in greater detail elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, including the sections titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes included elsewhere in this prospectus, before making an investment decision. Unless the context otherwise requires, all references in this prospectus to "we," "us," "our," "the company" and "RAPT" refer to RAPT Therapeutics, Inc.

Overview

We are a clinical-stage immunology-based biopharmaceutical company focused on discovering, developing and commercializing oral small molecule therapies for patients with significant unmet needs in oncology and inflammatory diseases. Utilizing our proprietary drug discovery and development engine, we are developing highly selective small molecules designed to modulate the critical immune responses underlying these diseases. In our first four years since inception, we have discovered and advanced two unique drug candidates each targeting C-C motif chemokine receptor 4 ("CCR4"). Our lead oncology drug candidate, FLX475, reached the clinic in just two and a half years and our lead inflammation drug candidate, RPT193, entered the clinic in August 2019. We entered into a license and collaboration agreement with Hanmi Pharmaceutical Co., LTD. ("Hanmi") for FLX475 in the Republic of Korea, the Republic of China (Taiwan), and the People's Republic of China, including the special administrative regions of Macau and Hong Kong (the "Hanmi Territory") in December 2019, and have an ongoing clinical collaboration with Merck, also for FLX475. We are also pursuing a range of targets, including general control nonderepressible 2 ("GCN2") and hematopoietic progenitor kinase 1 ("HPK1"), that are in the discovery stage of development.

The following chart summarizes the status of the drug candidates in our current pipeline.

Diversified Pipeline with Significant Milestones Anticipated in 2020



* Clinical collaboration with Merck
** Regional collaboration and license with Hanmi in the Hanmi Territory – Phase 2 gastric cancer trial to be initiated after combination recommended Phase 2 dose (RP2D) selected

Our CCR4 Franchise

Our proprietary drug discovery and development engine has identified the cell surface receptor CCR4 as a drug target that potentially has broad applicability in oncology and inflammatory diseases. Receptors such as CCR4 bind to chemoattractant molecules called chemokines that orchestrate migration and homing of immune cells to specific tissues throughout the body. Chemokines specific for CCR4 are secreted from tumors and from allergically-inflamed tissues, but are not highly expressed in healthy tissues. Our approach is designed to enable selective restoration of the immune response within tumor and allergically inflamed tissues without systemically depleting immune cells and broadly suppressing the immune system. Each of our two unique drug candidates, FLX475 and RPT193, target CCR4 in a manner we believe is well suited for cancer and inflammatory disease, respectively.

CCR4 Antagonist for Oncology: FLX475

We are developing FLX475 for the treatment of a broad range of "charged" tumors, which represent cancer types we believe are most likely to respond to FLX475. In cancer, the secretion of certain chemokines from tumor cells and tumor-resident immune cells is responsible for recruitment of immunosuppressive regulatory T cells ("T_{reg}") to tumor sites. T_{reg} represent a dominant pathway for downregulating the immune response, and thus may limit the effectiveness of currently available therapies such as checkpoint inhibitors. Therefore, blocking the migration of T_{reg} has the potential to restore naturally-occurring antitumor immunity as well as to synergize with a variety of both conventional and immune-based therapies, such as radiation, chemotherapy, checkpoint inhibitors, immune stimulators and adoptive T cell therapy. We believe that the inhibition of CCR4 has the potential to bring therapeutic benefit to patients across a wide spectrum of tumors in a manner similar to other immuno-oncology therapies that have been shown to be effective against multiple tumor types, while also potentially deepening or broadening clinical responses to these therapies.

Our proprietary drug discovery and development engine has identified certain tumors in which the abundance of T_{reg} is likely to be a cause of immune suppression. We refer to these tumors as "charged," as defined by high levels of (i) CCR4 ligands, (ii) T_{reg} and (iii) $CD8^+$ effector cells. These "charged" tumors include tumor types such as non-small cell lung cancer, triple negative breast cancer, head and neck squamous cell carcinoma, nasopharyngeal cancer, gastric cancer, certain Hodgkin and non-Hodgkin lymphomas, and cervical cancer. Additionally, we have discovered that the presence of oncogenic viruses, such as Epstein-Barr virus and human papillomavirus, is associated with tumors that are highly "charged" and allows prospective patient selection.

FLX475 is a small molecule CCR4 antagonist designed to block the migration of T_{reg} specifically into tumors, but not healthy tissues, without depleting T_{reg} throughout the body, which we believe may decrease the likelihood of side effects. We have completed a placebo-controlled, double-blinded dose-escalating Phase 1 clinical trial of FLX475 in 104 healthy volunteers. FLX475 was well tolerated and demonstrated dose-dependent inhibition of CCR4 with no observed immune-related adverse events or significant clinical adverse events. Daily dosing within the single dose arm ranged between 5 mg and 1,000 mg and in the multiple dose arm between 25 mg and 150 mg a day for 14 days. At the 75 mg daily dose, FLX475 exceeded the targeted receptor occupancy in six out of six healthy volunteers, which, in our preclinical studies, corresponded with a 90% inhibition of in vitro T_{reg} migration and the highest level of inhibition of in vivo T_{reg} migration and antitumor activity. We are currently conducting a Phase 1/2 trial of FLX475 as a monotherapy and in combination with pembrolizumab (marketed as Keytruda). The Phase 1 portion of the study is a standard dose escalation study intended primarily to evaluate safety, pharmacokinetics and pharmacodynamics in patients with multiple tumor types including some that may be "charged." As we previously reported, a patient with NSCLC in the 50 mg FLX475 and Keytruda® (pembrolizumab) cohort that had failed prior treatment with anti-PD-L1 therapy (atezolizumab) has had a confirmed partial response ("PR") under RECIST 1.1 criteria, based on radiological

analysis performed at the clinical investigator site, with a 37.5% reduction in target lesion measurement at 8 weeks and a 47% reduction at 14 weeks. The patient remains on study and in response, and has been able to escalate his dose to 75 mg. The Phase 2 portion of the trial will evaluate FLX475 as a monotherapy and in combination with pembrolizumab specifically in patients with several types of "charged" tumors, which represent cancer types we believe are most likely to respond to FLX475, and we anticipate results from the Phase 2 portion of the trial could provide clinical proof-of-concept ("PoC"). We are currently enrolling the Phase 2 monotherapy expansion cohorts at a daily dose of 100 mg and in February 2020 we opened for enrollment the Phase 2 combination therapy expansion cohorts at a daily dose of 100 mg. We intend to provide an initial data readout from the Phase 1/2 trial in the second quarter of 2020. For more information regarding the risks associated with our Phase 1/2 clinical trial for FLX475, please see "Risk Factors—Risks Related to Our Business—FLX475 and RPT193 are in clinical development, which may fail or suffer delays that materially and adversely affect their commercial viability."

In preclinical studies, FLX475 caused a 56-78% reduction in T_{reg} recruitment into tumors in two out of two experiments in mice. In contrast, CCR4 antagonism did not cause T_{reg} reductions in skin, blood, or lymphoid organs in seven out of seven mice in two out of two experiments. This reduction of T_{reg} recruitment by tumors in mice was sufficient to increase effector immune cells ($CD8^+$) by an average of 3 fold (ranging from 1.7 to 4.1 fold in individual mice). In addition, in preclinical tumor models, use of our CCR4 antagonist as a single agent resulted in tumor growth inhibition comparable to an immune checkpoint inhibitor in three out of four experiments. In combination with checkpoint inhibitors, our CCR4 antagonist led to tumor reduction and eradication greater than checkpoint inhibitors alone and did not appear to negatively impact effector immune cells.

We own an issued U.S. composition of matter patent directed to FLX475 that is scheduled to expire in 2037 (not including any applicable extensions, if approved). We have entered into a collaboration and license agreement with Hanmi, whereby we granted Hanmi the exclusive rights to develop, manufacture and commercialize FLX475 in the Hanmi Territory.

CCR4 Antagonist for Allergic Inflammatory Disease: RPT193

RPT193 is a small molecule CCR4 antagonist that blocks the recruitment of inflammatory immune cells, known as type 2 T helper cells ("Th2 cells"), which are clinically implicated in allergic inflammatory diseases. We are developing RPT193 for the treatment of a broad range of allergic inflammatory diseases, the first of which is atopic dermatitis ("AD"), a chronic, inflammatory skin disease characterized by skin barrier disruption and immune dysregulation. We initiated a first-in-human trial in August 2019 that we refer to as "seamless" given that it starts with healthy volunteers and then transitions directly into a cohort of patients with AD. In January 2020, we completed the initial Phase 1a single and multiple dose escalation cohorts of healthy volunteers and the blinded safety, pharmacokinetic, and pharmacodynamic data from this Phase 1a portion of the trial have demonstrated the ability to achieve target drug levels and receptor occupancy with an acceptable safety profile using once-daily dosing of RPT193 in healthy volunteers. We expect to initiate the Phase 1b portion of the trial in AD patients in February 2020 and we anticipate reporting PoC results from this trial in the third quarter of 2020.

While there are marketed injectable products for the treatment of AD, as well as oral and injectable drug candidates in development, we believe there is an unmet need for a safe and effective oral treatment. In preclinical studies, oral administration of RPT193 resulted consistently in statistically significant ($p < 0.05$) reduction of inflammation in allergic skin (nine out of nine experiments) and airway inflammation models (two out of two experiments). In five of five preclinical experiments in mice, in a head-to-head comparison, we observed that the activity of oral RPT193 was similar to that observed with an anti-IL13 antibody. In other preclinical studies, oral RPT193 demonstrated therapeutic efficacy similar to an anti-IL-4 receptor antibody

given systemically. We believe based on our preclinical pharmacology and Good Laboratory Practice ("GLP") toxicology results, if confirmed in clinical trials, combined with the convenience of once daily oral dosing, RPT193, if approved by the FDA, could fill an unmet medical need for the treatment of allergic disorders.

CCR4 is highly expressed on Th2 cells. In allergic inflammatory diseases, including AD, chemokines recruit Th2 cells via CCR4 into inflamed tissues. Once Th2 cells enter tissues such as the skin or the airways in the lung, they secrete proteins known to drive the inflammatory response. The role of Th2 cells has been clinically validated by, among others, dupilumab, an injectable biologic targeting this pathway. Further evidence of CCR4's role in AD includes the observation of higher levels of CCR4 ligands in AD patients compared with healthy humans; these ligands also correlate with the severity of disease. We believe that by inhibiting CCR4, RPT193 has the potential to bring therapeutic benefit to patients across a broad spectrum of additional allergic inflammatory diseases, including asthma, chronic urticaria (skin rash), allergic conjunctivitis, chronic rhinosinusitis and eosinophilic esophagitis (inflammation of the esophagus).

We are developing RPT193 initially in AD because there is:

- an unmet need for a safe and effective oral treatment;
- a potentially efficient path to PoC, due to high prevalence of disease and short time to clinically relevant endpoints;
- a well-defined set of clinical endpoints that have historically been accepted for regulatory approval, which are usable for PoC as well as for subsequent pivotal studies;
- easy access to patient samples, such as skin biopsies, to interrogate mechanisms of action and clinical biomarkers of efficacy; and
- a precedent that PoC in AD has translated to other Th2 driven allergic inflammatory diseases.

We hold worldwide rights to RPT193 and have pending patent applications with respect to RPT193 that, if issued, would be scheduled to expire in 2039 (not including any applicable extensions, if approved).

GCN2 and HPK1 Programs for Oncology

GCN2 is a fundamental driver of immune suppression and the survival of tumor cells under the conditions of metabolic stress typically seen in the tumor microenvironment. Preclinical studies have shown that the inhibition of GCN2 can result in tumor cell death in vitro and restoration of immune function under these stress conditions. The GCN2 pathway is generally not active in healthy tissue suggesting the potential for a favorable therapeutic index for drugs targeting GCN2. Preclinical in vitro studies have demonstrated that a potential inhibitor of GCN2 (an "RPT-GCN2i") has the ability to increase T cell proliferation and function in nutrient-deprived conditions to levels comparable to T cells cultured in non-nutrient-deprived conditions (six out of six studies). An RPT-GCN2i also reduced immune suppression induced by myeloid-derived suppressor cells as measured by an increase in T cell proliferation (by 80-148% of control in immune cells from five out of five human donors). Preclinical in vivo studies demonstrated that oral administration of an RPT-GCN2i elicited consistent (four out of four experiments) antitumor responses in a mouse model for colorectal cancer. Additionally, we have demonstrated single agent and combination activity in several other mouse tumor models. We are developing an RPT-GCN2i with the intent of selecting a preclinical candidate in 2020.

HPK1 is a negative regulator of T cell activation, and the inhibition of HPK1 has the potential to enhance T cell function and antitumor activity. HPK1 was identified in a RAPT computational screen, which also

identified clinically validated targets including PD-1, as well as CCR4. We are refining the chemical structure of our lead HPK1 compounds utilizing high resolution crystal structures and demonstrated that inhibition of HPK1 enhanced activation of primary mouse and human T cells in vitro, as well as antigen-specific CD8+ T cell effector function in vivo. Oral administration of an HPK1 inhibitor resulted in single agent antitumor activity and complete tumor regression in multiple mice when dosed in combination with a checkpoint inhibitor.

Our Proprietary Drug Discovery and Development Engine

Through the deep expertise of our team in immunology and drug discovery, supported by advanced computational biology, we are developing the ability to exploit difficult targets, including through proprietary know-how. We refer to this as our "proprietary drug discovery and development engine." This engine is built upon the following four key pillars:

- computationally-driven disease target and biomarker identification;
- efficient design of small molecule drug properties;
- data-driven patient selection; and
- nimble clinical execution.

We believe that the drug candidates generated from this engine, if approved, will significantly improve the treatment paradigms and outcomes for patients by fundamentally modulating the immune responses in a range of cancers and inflammatory diseases.

Risks Associated with Our Business

We have performed preclinical studies in mouse models to examine the potential mechanism of action, toxicity and therapeutic activity of our drug candidates. By the nature of such experiments, there is variability in the degree and ranges of results observed, and the statistical significance of the findings from each experiment. For specific details on how the studies were conducted, ranges of results observed and statistical significance of the findings, see the section titled "Business." Data from preclinical studies should always be interpreted with caution, as results in preclinical studies do not necessarily predict the results in clinical studies.

Our business is subject to numerous risks and uncertainties, including those highlighted in the section titled "Risk Factors" immediately following this prospectus summary. These risks include, among others, the following:

- We are a clinical stage biopharmaceutical company with a history of losses. We expect to continue to incur significant losses for the foreseeable future and may never achieve or maintain profitability, which could result in a decline in the market value of our common stock.
- FLX475 and RPT193 are in clinical development, which may fail in development or suffer delays that materially and adversely affect their commercial viability.
- FLX475, RPT193 or other future drug candidates may not demonstrate the safety and efficacy necessary to support further development or commercial viability.
- We may not be successful in our efforts to use and expand our proprietary drug discovery and development engine to build a pipeline of drug candidates, and as an organization we have no history of successfully developing drugs.

- If we or others later identify undesirable side effects caused by FLX475 or RPT193, our ability to market and derive revenue from the drug candidate could be compromised.
- Even if we consummate this offering, we will need substantial additional funds to advance development of drug candidates and our proprietary drug discovery and development engine, and we cannot guarantee that we will have sufficient funds available in the future to develop and commercialize our current or potential future drug candidates.
- If we encounter difficulties enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.
- We face intense competition from entities that have developed or may develop drug candidates for the treatment of the diseases that we are currently targeting or may target in the future. If these companies develop technologies or drug candidates more rapidly than we do, or if their technologies or drug candidates are more effective than our candidates, our ability to develop and successfully commercialize drug candidates may be adversely affected.
- If third parties on which we rely to conduct certain preclinical studies and clinical trials do not perform as contractually required, fail to satisfy regulatory or legal requirements or miss expected deadlines, our development program could be delayed with material and adverse impacts on our business and financial condition.
- We may experience difficulties in managing our growth and expanding our operations.
- We may not be able to enter into collaborations or strategic transactions on acceptable terms, if at all, which could adversely affect our ability to develop and commercialize current and potential future drug candidates, impact our cash position and increase our expenses.
- If we are unable to obtain, maintain, enforce or defend intellectual property rights related to our technology and current or future drug candidates, or if our intellectual property rights are inadequate, we may not be able to compete effectively.
- Clinical development includes a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results.

Corporate Information

We were incorporated under the laws of the state of Delaware in March 2015 under the name FLX Bio, Inc. In April 2015, Flexus Biosciences, Inc. (“Flexus”) contributed and assigned to us the assets and rights relating primarily to its fms-like tyrosine kinase receptor 3, cyclin-dependent kinase 4/6 inhibitor and small molecule T_{reg} cancer immunotherapy in exchange for shares of our convertible preferred stock, which were immediately distributed to the preferred stockholders of Flexus. In May 2019, we changed our name to RAPT Therapeutics, Inc. Our principal executive offices are located at 561 Eccles Avenue, South San Francisco, California 94080. Our telephone number is (650) 489-9000. Our website address is www.rapt.com. Information contained on, or that can be accessed through, our website is not incorporated by reference into this prospectus, and you should not consider information contained on, or that can be accessed through, our website to be part of this prospectus or in deciding whether to purchase our common stock.

RAPT, the RAPT logo and our other registered or common law trade names, trademarks or service marks appearing in this prospectus are the property of RAPT Therapeutics, Inc. Trade names, trademarks and service marks of other companies appearing in this prospectus are the property of their respective owners. Solely for convenience, trademarks and trade names referred to in this prospectus may appear without the ® or ™ symbols.

Implications of Being an Emerging Growth Company

We qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act (the "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:

- not being required to comply for a certain period of time with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended (the "Sarbanes-Oxley Act");
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a stockholder advisory vote on executive compensation and any golden parachute payments not previously approved.

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, pursuant to the JOBS Act, as an "emerging growth company" we have elected to take advantage of an extended transition period for complying with new or revised accounting standards. As a result, we will not be subject to the same new or revised accounting standards as other public companies that comply with the public company effective dates, including but not limited to the new lease accounting standard. This effectively permits us to delay adoption of certain accounting standards until those standards would otherwise apply to private companies. As a result, our consolidated financial statements may not be comparable to the financial statements of issuers who are required to comply with the effective dates for new or revised accounting standards that are applicable to public companies, which may make our common stock less attractive to investors.

We may take advantage of these provisions until December 31, 2024. However, if certain events occur prior to December 31, 2024, including if (i) we become a "large accelerated filer," with at least $700 million of equity securities held by non-affiliates; (ii) our annual gross revenues exceed $1.07 billion; or (iii) we issue more than $1.0 billion of non-convertible debt in any three-year period, we will cease to be an "emerging growth company" prior to December 31, 2024.

The Offering

Common stock offered by us	2,500,000 shares
Common stock to be outstanding after this offering	24,329,584 shares
Underwriters' option to purchase additional shares of common stock	375,000 shares
Use of proceeds	We estimate that the net proceeds from the sale of our common stock in this offering will be approximately $69.7 million (or approximately $80.3 million if the underwriters exercise in full their option to purchase additional shares of our common stock), based on a public offering price of $30.00 per share, after deducting underwriting discounts and commissions and offering expenses payable by us. We currently expect to use the net proceeds from this offering, together with our existing cash and cash equivalents, as follows: • Approximately $20.0 million to $25.0 million to further the clinical development of FLX475; • Approximately $20.0 million to $25.0 million to further the clinical development of RPT193; and • The remaining proceeds for continued development of other future drug candidates, continued refinement of our proprietary drug discovery and development engine and other general corporate purposes. See "Use of Proceeds" for additional information.
Risk factors	See "Risk Factors" for additional information and a discussion of factors you should carefully consider before deciding to invest in our common stock.
Nasdaq Global Market symbol	"RAPT"

The number of shares of our common stock that will be outstanding after this offering is based on 18,402,224 shares of our common stock (including shares of our convertible preferred stock on an as-converted basis) outstanding as of September 30, 2019 and 3,427,360 shares of our common stock issued in connection with our initial public offering in November 2019, and excludes:

- 943,610 shares of our common stock issuable upon the exercise of options to purchase shares of our common stock issued under our 2019 Equity Incentive Plan and 2015 Stock Plan, and outstanding as of September 30, 2019, with a weighted-average exercise price of $6.82 per share;

- 555,439 shares of our common stock issuable upon the exercise of stock options granted after September 30, 2019, with a weighted-average exercise price of $23.87 per share;
- 56,500 shares subject to restricted stock unit awards granted after September 30, 2019;
- 1,669,759 shares of our common stock reserved and available for future issuance under our 2019 Equity Incentive Plan; and
- 240,336 shares of our common stock reserved for future issuance under our 2019 Employee Stock Purchase Plan ("ESPP"), which includes an annual evergreen increase.

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

- no exercise of the outstanding options described above;
- no exercise of the underwriters' option to purchase up to an additional 375,000 shares of our common stock; and
- the filing and effectiveness of our amended and restated certificate of incorporation in Delaware and the adoption of our amended and restated bylaws, both of which occurred upon the closing of our initial public offering on November 4, 2019.

Summary Consolidated Financial Data

The following tables set forth a summary of our historical consolidated financial data as of, and for the periods ended on, the dates indicated. The consolidated statements of operations data for the fiscal years ended December 31, 2017 and 2018, and the consolidated balance sheet data as of December 31, 2017 and 2018, are derived from our audited consolidated financial statements and related notes included elsewhere in this prospectus. The consolidated statements of operations data for the nine months ended September 30, 2018 and 2019 and the consolidated balance sheet data as of September 30, 2019 are derived from our unaudited condensed consolidated financial statements and related notes included elsewhere in this prospectus. You should read this data together with our consolidated financial statements and related notes appearing elsewhere in this prospectus and the information in "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations." Our historical results are not necessarily indicative of the results to be expected in the future, and the results for the nine months ended September 30, 2019 are not necessarily indicative of the results to be expected for the full year or any other period.

	Year ended December 31,		Nine Months Ended September 30,	
	2017	2018	2018	2019
	(in thousands, except share and per share data)			
Consolidated Statements of Operations Data:				
Operating costs and expenses:				
Research and development	$ 25,618	$ 31,767	$ 23,387	$ 24,720
General and administrative	3,713	5,180	3,889	6,094
Total operating expenses	29,331	36,947	27,276	30,814
Loss from operations	29,331	36,947	27,276	30,814
Other income, net	216	800	559	1,033
Net loss	$ (29,115)	$ (36,147)	$ (26,717)	$ (29,781)
Net loss per share, basic and diluted(1)	$ (67.45)	$ (58.09)	$ (45.11)	$ (40.15)
Weighted average number of shares used in computing net loss per share, basic and diluted	431,679	622,289	592,237	741,711
Pro forma net loss per share, basic and diluted(1)		$ (2.50)		$ (1.69)
Weighted average number of shares used in computing pro forma net loss per share, basic and diluted(1)		14,461,086		17,641,844

(1) See Note 13 to our audited consolidated financial statements and Note 11 to our unaudited interim condensed consolidated financial statements for an explanation of the method used to calculate historical and pro forma basic and diluted net loss per share.

	As of September 30, 2019		
	Actual	Pro Forma(1)	Pro Forma as Adjusted(2)
	(in thousands)		
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 48,310	$ 82,073	$ 151,773
Working capital	45,767	79,530	149,230
Total assets	58,369	92,132	161,832
Convertible preferred stock	175,490	—	—
Accumulated deficit	(148,734)	(148,734)	(148,734)
Total stockholders' (deficit) equity	(124,797)	84,456	154,156

(1) The pro forma column in the consolidated balance sheet data above gives effect to the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 17,467,184 shares of common stock as of September 30, 2019 and the issuance and sale of common stock in connection with the closing of our initial public offering for net proceeds of $33.8 million.

(2) The pro forma as adjusted column gives effect to the adjustment described in footnote (1) above and the receipt of $69.7 million in net proceeds from the sale by us of 2,500,000 shares of common stock in this offering at the public offering price of $30.00, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should consider and read carefully all of the risks and uncertainties described below, as well as other information included in this prospectus, including our consolidated financial statements and related notes appearing at the end of this prospectus and our "Management's Discussion and Analysis of Financial Conditions and Results of Operations," before making an investment decision. The risks described below are not the only ones facing us. The occurrence of any of the following risks or additional risks and uncertainties not presently known to us or that we currently believe to be immaterial could materially and adversely affect our business, financial condition or results of operations. In such case, the trading price of our common stock could decline, and you may lose all or part of your original investment. This prospectus also contains forward-looking statements and estimates that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of a number of specific factors, including the risks and uncertainties described below.

Risks Related to Our Business

We are a clinical stage biopharmaceutical company with a history of losses. We expect to continue to incur significant losses for the foreseeable future and may never achieve or maintain profitability, which could result in a decline in the market value of our common stock.

We are a clinical stage biopharmaceutical company with a history of losses. Since our inception, we have devoted substantially all of our resources to research and development, including our drug discovery and development engine, preclinical studies, clinical trials, raising capital, building our management team and our intellectual property portfolio. Our net loss was $29.8 million and $36.1 million for the nine months ended September 30, 2019 and for the year ended December 31, 2018, respectively. As of September 30, 2019, we had an accumulated deficit of $148.7 million. Substantially all of our losses have resulted from expenses incurred in connection with our research and development programs and from general and administrative costs associated with our operations. To date, we have not generated any revenue. Furthermore, we do not expect to generate any revenue from product sales for the foreseeable future, and we expect to continue to incur significant operating losses for the foreseeable future due to the cost of research and development, preclinical studies, clinical trials and the regulatory approval process for our current and potential future drug candidates.

We expect our net losses to increase substantially as we advance the clinical development of our lead drug candidates, FLX475 and RPT193. However, the amount of our future losses is uncertain. Our ability to generate revenue from product sales and achieve or sustain profitability, if ever, will depend on, among other things, successfully developing drug candidates, obtaining regulatory approvals to market and commercialize drug candidates, manufacturing any approved products on commercially reasonable terms, entering into any future collaborations or other partnerships, establishing a sales and marketing organization or suitable third-party alternatives for any approved product and raising sufficient capital to finance our operations. If we, or any of our future partners, are unable to develop and commercialize one or more of our drug candidates, or if sales revenue from any drug candidate that receives regulatory approval is insufficient, we will not achieve or sustain profitability, which would have a material and adverse effect on our business, financial condition, results of operations and prospects.

FLX475 and RPT193 are in clinical development, which may fail or suffer delays that materially and adversely affect their commercial viability.

We have no products on the market or that have gained regulatory approval. Other than FLX475 and RPT193, none of our drug candidates has ever been tested in humans. None of our drug candidates has advanced into late-stage development or a pivotal clinical trial and it may be years before any such trial is initiated, if at all. Our ability to achieve and sustain profitability depends on us developing, obtaining regulatory approval for and successfully commercializing one or more drug candidates, either alone or with partners.

Before obtaining regulatory approval for any of our drug candidates, we must conduct extensive preclinical studies and clinical trials to demonstrate the safety and efficacy of our drug candidates in humans. Although we have successfully completed preclinical studies and a Phase 1 clinical trial with healthy volunteers for FLX475, are conducting a Phase 1/2 clinical trial investigating FLX475 as a single agent and in combination with pembrolizumab in a broad range of tumors, have completed the initial Phase 1a single and multiple dose escalation cohorts of healthy volunteers of a seamless Phase 1 trial of RPT193, and expect to initiate the Phase 1b portion of that trial in AD patients in February 2020, more clinical trials are needed and there is no guarantee that the FDA will permit us to conduct additional clinical trials for FLX475, RPT193 or any other potential drug candidates. Further, we cannot be certain of the timely completion or outcome of our clinical trials and cannot predict if the FDA or other regulatory authorities will accept our proposed clinical programs, or if the outcome of our preclinical studies or clinical trials will ultimately support the further development of FLX475, RPT193 or any other potential drug candidates.

FLX475 and RPT193 are in clinical development, and we are subject to the risks of failure inherent in the development of drug candidates based on novel approaches, targets and mechanisms of action. Although FLX475 is currently in a Phase 1/2 clinical trial, there is no guarantee that FLX475 will benefit patients. In the ongoing Phase 1/2 clinical trial of FLX475, a partial response has been observed in one NSCLC patient in the 50 mg FLX475 and pembrolizumab cohort. It is possible that no response will be observed in other patients or that the observed partial response was caused solely by the pembrolizumab administered to the patient, and not by FLX475, or that the partial response was spontaneous, and unrelated to either FLX475 or pembrolizumab. Additionally, although RPT193 has shown activity in several preclinical models, and we have completed the initial Phase 1a single and multiple dose escalation cohorts of healthy volunteers of a seamless Phase 1 trial of RAPT193, and we expect to initiate the Phase 1b portion of that trial in AD patients in February 2020, there is no guarantee that we will be able to proceed with its clinical development or that it will benefit patients. Even though we have designed and selected our drug candidates to achieve an intended biological effect and to avoid certain others, and even if we have demonstrated this effect in preclinical models, there can be no assurance that the effect will be observed or avoided, as the case may be, in clinical trials or that the drug candidate will offer any significant clinical benefit to humans. Results in preclinical studies do not necessarily predict the results of clinical studies. Additionally, even though our drug candidates are designed to address the same indications as existing drugs and therapies, we have not conducted head-to-head clinical trials comparing our drug candidates with such existing drugs and therapies. Accordingly, you should consider our prospects in light of the costs, uncertainties, delays and difficulties frequently encountered by clinical and preclinical stage biopharmaceutical companies such as ours.

FLX475 is currently undergoing clinical development and testing as a single agent and in combination with pembrolizumab, which is supplied to us by Merck under our collaboration agreement with Merck. If Merck were to terminate our collaboration agreement, we may be forced to purchase pembrolizumab to continue our current and planned clinical trials or to pursue another anti-PD-1 therapy for co-administration with FLX475 in place of pembrolizumab, which may require us to restart preclinical studies or clinical trials, any of which could result in a change to our business plan and materially harm our business, financial condition, results of operations and prospects. In addition, if FLX475 is approved as a treatment in combination with pembrolizumab, then the availability of pembrolizumab for administration with FLX475 will affect our ability to commercialize FLX475. For example, if supply of pembrolizumab were constrained for any reason it could have the effect of limiting the commercial uptake of FLX475, if approved for commercial sale.

We may not have the financial resources to continue development of, or to enter into new collaborations for, FLX475 and RPT193 or any potential future drug candidates. Our position may be exacerbated if we experience any issues that delay or prevent regulatory approval of, or our ability to commercialize, a drug candidate, such as:

- negative or inconclusive results from our clinical trials or the clinical trials of others for drug candidates similar to ours, leading to a decision or requirement to conduct additional preclinical studies or clinical trials or abandon a program;

- product-related side effects experienced by participants in our clinical trials or by individuals using drugs or therapeutics similar to ours;
- delays in submitting INDs or comparable foreign applications, or delays or failure in obtaining the necessary approvals from regulators to commence a clinical trial, or a suspension or termination of a clinical trial once commenced;
- conditions imposed by the FDA, or other regulatory authorities regarding the scope or design of our clinical trials;
- delays in enrolling research subjects in clinical trials;
- high drop-out rates of research subjects;
- inadequate supply or quality of drug candidate components or materials or other supplies necessary for the conduct of our clinical trials;
- greater-than-anticipated clinical trial costs;
- poor effectiveness of our drug candidates during clinical trials;
- unfavorable FDA or other regulatory agency inspections and review of a clinical trial or manufacturing site;
- failure of our third-party contractors or investigators to comply with regulatory requirements or otherwise meet their contractual obligations in a timely manner, or at all;
- delays and changes in regulatory requirements, policies and guidelines; or
- the FDA or other regulatory agencies' data interpretation.

Further, we and our potential future partners may never receive approval to market and commercialize any drug candidate. Even if we or a potential future partner obtains regulatory approval, the approval may be for targets, disease indications or patient populations that are not as broad as we intended or desired or may require labeling that includes significant use or distribution restrictions or safety warnings. We or a potential future partner may be subject to post-marketing testing requirements to maintain regulatory approval.

FLX475, RPT193 or other future drug candidates may not demonstrate the safety and efficacy necessary to support further clinical development or commercial viability.

We have completed a Phase 1 clinical trial with healthy volunteers for FLX475 and are conducting a Phase 1/2 clinical trial investigating FLX475 as a single agent and in combination with pembrolizumab. In addition, we have completed the initial Phase 1a single and multiple dose escalation cohorts of healthy volunteers of a seamless Phase 1 trial of RPT193, and expect to initiate the Phase 1b portion of that trial in AD patients in February 2020. We may ultimately discover that neither FLX475 nor RPT193 possesses certain properties that we currently believe are therapeutically effective or safe. For example, although RPT193 has exhibited encouraging results in preclinical models of atopic dermatitis and allergic asthma, it may not demonstrate the same properties in humans and may interact with human biological systems in unforeseen, ineffective or harmful ways. As a result, we may never succeed in developing a marketable product based on RPT193. If FLX475, RPT193 or any of our potential future drug candidates prove to be ineffective, unsafe or commercially unviable, our entire pipeline could have little, if any, value, which could require us to change our focus and approach to small molecule discovery and development, which would have a material and adverse effect on our business, financial condition, results of operations and prospects.

We may not be successful in our efforts to use and expand our proprietary drug discovery and development engine to build a pipeline of drug candidates, and as an organization we have no history of successfully developing drugs.

A key element of our strategy is to use and expand our proprietary drug discovery and development engine to build a pipeline of potential drug candidates and advance these drug candidates through preclinical studies and clinical development for the treatment of various diseases. As an organization, we have never developed a drug candidate through to commercialization nor have we ever conducted a pivotal clinical trial. Although our research and development efforts to date have resulted in our identification and development of FLX475, RPT193 and other potential future drug candidates, neither our proprietary drug discovery and development engine nor our organization has a track record of success. Our current drug candidates may not be safe or effective therapeutics and we may not be able to develop any successful drug candidates. Our proprietary drug discovery and development engine is evolving and may not reach a state at which building a pipeline of drug candidates is possible. Even if we are successful in building our pipeline of drug candidates, the potential drug candidates that we identify may not be suitable for clinical development or generate acceptable clinical data, including unacceptable toxicity or other characteristics that indicate that the drug candidates are unlikely to be products that will receive marketing approval from the FDA or other regulatory authorities or achieve market acceptance. Even if the drug candidates we identify are suitable for clinical development, our lack of experience as an organization at developing drugs may cause us to fail in successfully developing the drug candidate through to commercialization. If we do not successfully develop and commercialize drug candidates, we will not be able to generate product revenue in the future.

Failure to successfully validate, develop and obtain regulatory approval for companion diagnostics for our drug candidates could harm our drug development strategy and operational results.

As one of the elements of our clinical development approach, we may seek to screen and identify subsets of patients who are more likely to benefit from our drug candidates. To achieve this, we may seek to develop and commercialize companion diagnostics by us or by third-party collaborators. Companion diagnostics are sometimes developed in conjunction with clinical programs for an associated product. The approval of a companion diagnostic as part of the product label would limit the use of the drug candidate to those patients who are more likely to benefit from our drug candidate.

Companion diagnostics are subject to regulation by the FDA and other regulatory authorities as medical devices and require separate clearance or approval prior to their commercialization. To date, the FDA has required premarket approval of all companion diagnostics for oncology therapies. We may encounter difficulties in developing and obtaining approval for these companion diagnostics. Any delay or failure by us or third-party collaborators to develop or obtain regulatory approval of a companion diagnostic could delay or prevent approval of our related drug candidates. The time and cost associated with developing a companion diagnostic may not prove to have been necessary in order to successfully market the product.

The market may not be receptive to our current or potential future drug candidates, and we may not generate any revenue from the sale or licensing of our drug candidates.

Even if regulatory approval is obtained for a drug candidate, including FLX475 or RPT193, we may not generate or sustain revenue from sales of such products. Market acceptance of our current and potential future drug candidates will depend on, among other factors:

- the timing of our receipt of any marketing and commercialization approvals;
- the terms of any approvals and the countries in which approvals are obtained;
- the safety and efficacy of our drug candidates;

- the prevalence and severity of any adverse side effects associated with our drug candidates;
- limitations or warnings contained in any labeling approved by the FDA or other regulatory authority;
- relative convenience and ease of administration of our drug candidates;
- the extent to which physicians recommend our products to their patients;
- the availability of coverage and adequate government and third-party payor reimbursement;
- the pricing of our products, particularly as compared to alternative treatments; and
- the availability of alternative effective treatments for the disease indications our drug candidates are intended to treat and the relative risks, benefits and costs of those treatments.

If any drug candidate we commercialize fails to achieve market acceptance, it could have a material and adverse effect on our business, financial condition, results of operations and prospects.

We may not be successful in our efforts to expand indications for approved drug candidates

Part of our drug development strategy is to clinically test and seek regulatory approval for our drug candidates in indications in which we believe there is the most evidence that we will be able to quickly generate PoC data. We then intend to expand clinical testing and seek regulatory approvals in other indications within oncology and inflammatory diseases. Conducting clinical trials for additional indications for our drug candidates requires substantial technical, financial and human resources and is prone to the risks of failure inherent in drug development. We cannot provide you any assurance that we will be successful in our effort to obtain regulatory approval for our drug candidates for additional indications even if we obtain approval for an initial indication.

If we or others later identify undesirable side effects caused by FLX475 or RPT193, our ability to market and derive revenue from the drug candidate could be compromised.

Undesirable side effects caused by FLX475, RPT193 or any other potential future drug candidate could cause regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other regulatory authorities. While we have not discovered any adverse side effects of FLX475 or RPT193 in healthy subjects that have limited our ability to test FLX475 or RPT193 in humans, it is possible that there will be undesirable side effects associated with their use. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of these side effects. In such an event, our trials could be suspended or terminated, and the FDA or other regulatory authorities could order us to cease further development of or deny approval of a drug candidate for any or all targeted indications. Such side effects could also affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. Any of these occurrences may materially and adversely affect our business and financial condition and impair our ability to generate revenues.

Further, clinical trials by their nature utilize a sample of the potential patient population. With a limited number of patients and limited duration of exposure, rare and severe side effects of a drug candidate may only be uncovered when a significantly larger number of patients are exposed to the drug candidate or when patients are exposed for a longer period of time.

If any of our current or potential future drug candidates receive regulatory approval and we or others identify undesirable side effects caused by one of these products, any of the following adverse events could

occur, which could result in the loss of significant revenue to us and materially and adversely affect our results of operations and business:

- regulatory authorities may withdraw their approval of the product or seize the product;
- we may be required to recall the product or change the way the 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 subject to fines, injunctions or the imposition of civil or criminal penalties;
- regulatory authorities may require the addition of labeling statements, such as a "black box" warning or a contraindication;
- we may be required to 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.

Even if we consummate this offering, we will need substantial additional funds to advance development of drug candidates and our drug discovery and development engine, and we cannot guarantee that we will have sufficient funds available in the future to develop and commercialize our current or potential future drug candidates.

Since our inception, we have used substantial amounts of cash to fund our operations and expect our expenses to increase substantially in the foreseeable future. Developing our drug candidates and conducting clinical trials for the treatment of cancer and any other indications that we may pursue in the future will require substantial amounts of capital. Accordingly, we expect our expenses to increase in connection with our ongoing activities, particularly as we continue the research and development of, initiate clinical trials of, and seek marketing approval for, our drug candidates. In addition, if we obtain marketing approval for any of our drug candidates, we expect to incur significant commercialization expenses related to product sales, marketing, manufacturing and distribution. Furthermore, we expect to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we would be forced to delay, reduce or eliminate our research and development programs or future commercialization efforts.

As of December 31, 2019, we had $77.4 million in cash and cash equivalents. Based on current business plans, we believe that our current cash and cash equivalents will provide sufficient funds to enable us to meet our obligations for at least the next twelve months. Our future capital requirements and the period for which we expect our existing resources to support our operations may vary significantly from what we expect. Our monthly spending levels vary based on new and ongoing research and development and other corporate activities. Because of the numerous risks and uncertainties associated with the development and commercialization of our current and potential future drug candidates and the extent to which we may enter into collaborations with third parties to participate in their development and commercialization, we are unable to estimate the amounts of increased capital outlays and operating expenditures associated with our current and anticipated preclinical

studies, clinical trials and any approved marketing and commercialization activities. The timing and amount of our operating expenditures will depend largely on:

- the timing and progress of preclinical and clinical development activities;
- the timing and progress of the advancement of our drug discovery and development engine;
- the price and pricing structure that we are able to obtain from our third-party contract manufacturers to manufacture our preclinical study and clinical trial materials and supplies;
- the number and scope of preclinical and clinical programs we decide to pursue;
- our ability to maintain our current licenses, collaboration and research and development programs, including the continued agreement of Merck to supply pembrolizumab to us for use in our clinical trials;
- our ability to establish new collaborations;
- the progress of the development efforts of parties with whom we may in the future enter into collaboration and research and development agreements;
- the costs involved in obtaining, maintaining, enforcing and defending patents and other intellectual property rights;
- the cost and timing of regulatory approvals; and
- our efforts to enhance operational systems, secure sufficient laboratory space and hire additional personnel, including personnel to support development of our drug candidates and satisfy our obligations as a public company.

To date, we have primarily financed our operations through the sale of equity securities. We may seek to raise any necessary additional capital through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing and distribution arrangements. We cannot assure you that we will be successful in acquiring additional funding at levels sufficient to fund our operations or on terms favorable to us. If we are unable to obtain adequate financing when needed, we may have to delay, reduce the scope of or suspend one or more of our preclinical studies, clinical trials, research and development programs or commercialization efforts. To the extent that we raise additional capital through collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our current and potential future drug candidates, future revenue streams or research programs or to grant licenses on terms that may not be favorable to us. If we do raise additional capital through public or private equity or convertible debt offerings, the ownership interest of our existing stockholders will be diluted and the terms of these securities may include liquidation preferences or other rights that adversely affect our and our stockholders' rights. If we raise additional capital through debt financing, we may be subject to covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

We do not expect to realize revenue from product sales in the foreseeable future, if at all, and unless and until our current and potential future drug candidates are clinically tested, approved for commercialization and successfully marketed.

We may expend our limited resources to pursue a particular drug candidate and fail to capitalize on drug candidates 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 prioritize our efforts on specific research and development programs, including clinical development of FLX475, RPT193 or other future drug candidates. As a result, we may forgo or delay pursuit of other opportunities, including with potential future drug candidates that later 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 development programs and drug candidates for specific indications may not yield any commercially viable drug candidates. If we do not accurately evaluate the commercial potential or target market for a particular drug candidate, we may relinquish valuable rights to that drug candidate through partnership, 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 drug candidate.

We may not be able to enter into collaborations or strategic transactions on acceptable terms, if at all, which could adversely affect our ability to develop and commercialize current and potential future drug candidates, impact our cash position and increase our expense.

From time to time, we may consider strategic transactions, such as collaborations, acquisitions of companies, asset purchases, joint ventures and out- or in-licensing of drug candidates or technologies. For example, we entered a Collaboration and License Agreement with Hanmi in December 2019, pursuant to which we granted Hanmi the exclusive rights to develop, manufacture and commercialize FLX475 in the Republic of Korea the Republic of China (Taiwan), and the People's Republic of China, including the special administrative regions of Macau and Hong Kong (the "Hanmi Territory"). The competition for partners is intense, and the negotiation process may be time-consuming and complex. If we are not able to enter into collaborations or other strategic transactions, or continue our existing collaboration, we may not have access to required liquidity or expertise to further develop our potential future drug candidates or our drug discovery and development engine. Any such collaboration, or other strategic transaction, may require us to incur non-recurring or other charges, increase our near- and long-term expenditures and pose significant integration or implementation challenges or disrupt our management or business. We may acquire additional technologies and assets, form strategic alliances or create joint ventures with third parties that we believe will complement or augment our existing business, but we may not be able to realize the benefit of acquiring such assets. Conversely, any new collaboration that we do enter into may be on terms that are not optimal for us. These transactions would entail numerous operational and financial risks, including:

- exposure to unknown liabilities;
- disruption of our business and diversion of our management's time and attention in order to manage a collaboration or develop acquired products, drug candidates or technologies;
- incurrence of substantial debt or dilutive issuances of equity securities to pay transaction consideration or costs;
- higher-than-expected collaboration, acquisition or integration costs, write-downs of assets or goodwill or impairment charges, increased amortization expenses;
- difficulty and cost in facilitating the collaboration or combining the operations and personnel of any acquired business;
- impairment of relationships with key suppliers, manufacturers or customers of any acquired business due to changes in management and ownership; and
- the inability to retain key employees of any acquired business.

Accordingly, although there can be no assurance that we will undertake or successfully complete any collaborations or other strategic transactions of the nature described above, any transactions that we do complete may be subject to the foregoing or other risks and our business could be materially harmed by such transactions. Conversely, any failure to enter any collaboration or other strategic transaction that would be beneficial to us could delay the development and potential commercialization of our drug candidates and have a negative impact on the competitiveness of any drug candidate that reaches market.

In addition, to the extent that any of our current or future partners were to terminate a collaboration agreement, we may be forced to seek additional partnerships, which may be less favorable to us, or independently develop our current and future drug candidates, including funding preclinical studies or clinical trials, assuming marketing and distribution costs and obtaining, maintaining, enforcing and defending intellectual property rights, or, in certain instances, abandon drug candidates altogether, any of which could result in a change to our business plan and materially harm our business, financial condition, results of operations and prospects.

If third parties on which we rely to conduct certain preclinical studies and clinical trials do not perform as contractually required, fail to satisfy regulatory or legal requirements or miss expected deadlines, our development program could be delayed with material and adverse impacts on our business and financial condition.

We rely on third-party clinical investigators, contract research organizations ("CROs"), clinical data management organizations and consultants to design, conduct, supervise and monitor certain preclinical studies and any clinical trials. Because we intend to rely on these third parties and will not have the ability to conduct certain preclinical studies or clinical trials independently, we will have less control over the timing, quality and other aspects of such preclinical studies and clinical trials than we would have had if we conducted them on our own. These investigators, CROs and consultants will not be our employees and we will have limited control over the amount of time and resources that they dedicate to our programs. These third parties may have contractual relationships with other entities, some of which may be our competitors, which may draw time and resources from our programs. The third parties with which we may contract might not be diligent, careful or timely in conducting our preclinical studies or clinical trials, resulting in the preclinical studies or clinical trials being delayed or unsuccessful.

If we cannot contract with acceptable third parties on commercially reasonable terms, or at all, or if these third parties do not carry out their contractual duties, satisfy legal and regulatory requirements for the conduct of preclinical studies or clinical trials or meet expected deadlines, our clinical development programs could be delayed and otherwise adversely affected. In all events, we will be responsible for ensuring that each of our preclinical studies and clinical trials are conducted in accordance with the general investigational plan and protocols for the trial. The FDA may require preclinical studies to be conducted in accordance with good laboratory practices and clinical trials to be conducted in accordance with good clinical practices, including for designing, conducting, recording and reporting the results of preclinical studies and clinical trials to ensure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of clinical trial participants are protected. Our reliance on third parties that we do not control will not relieve us of these responsibilities and requirements. Any adverse development or delay in our clinical trials could have a material and adverse impact on our commercial prospects and may impair our ability to generate revenue.

If we encounter difficulties enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.

We may not be able to initiate or continue clinical trials for our current or potential future drug 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 other regulatory authorities. In particular, we are conducting a Phase 1/2 clinical trial investigating FLX475 as a single agent and in combination with pembrolizumab in a broad range of tumors

and we expect to initiate a Phase 1b clinical trial of RPT193 in AD patients in February 2020. We cannot predict how difficult it will be to enroll patients for trials in these indications. We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons. The enrollment of patients depends on many factors, including:

- the severity of the disease under investigation;
- the patient eligibility criteria defined in the clinical trial protocol;
- the size of the patient population required for analysis of the trial's primary endpoints;
- the proximity and availability of clinical trial sites for prospective patients;
- the patient referral practices of physicians;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- clinicians' and patients' perceptions as to the potential advantages of the drug candidate being studied in relation to other available therapies, including any new drugs that may be approved for the indications we are investigating;
- our ability to obtain and maintain patient consents; and
- the risk that patients enrolled in clinical trials will drop out of the trials before completion.

In addition, our future clinical trials will compete with other clinical trials for drug candidates that are in the same therapeutic areas as our drug candidates, and this competition will reduce the number and types of patients available to us, because some patients who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by one of our competitors. Since the number of qualified clinical investigators is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which will reduce the number of patients who are available for our clinical trials at such clinical trial sites. Additionally, because some of our clinical trials will be conducted in patients with advanced solid tumors, the patients are typically in the late stages of the disease and may experience disease progression or adverse events independent from our drug candidates, making them unevaluable for purposes of the trial and requiring additional enrollment. Delays in patient enrollment may result in increased costs or may affect the timing or outcome of the planned clinical trials, which could prevent completion of these trials and adversely affect our ability to advance the development of our drug candidates.

We may not be able to conduct, or contract others to conduct, animal testing in the future, which could harm our research and development activities.

Certain laws and regulations relating to drug development require us to test our drug candidates on animals before initiating clinical trials involving humans. Animal testing activities have been the subject of controversy and adverse publicity. Animal rights groups and other organizations and individuals have attempted to stop animal testing activities by pressing for legislation and regulation in these areas and by disrupting these activities through protests and other means. To the extent the activities of these groups are successful, our research and development activities may be interrupted or delayed.

Because we may rely on third parties for manufacturing and supply of our drug candidates, some of which are or may be sole source vendors, for preclinical and clinical development materials and commercial supplies, our supply may become limited or interrupted or may not be of satisfactory quantity or quality.

We currently rely on third-party contract manufacturers for our current and future clinical trial product materials and supplies. We do not produce any meaningful quantity of our drug candidates for clinical

development, and we do not currently own manufacturing facilities for producing such supplies. Furthermore, some of our manufacturers represent our sole source of supplies of current and future clinical development materials, including our source for the manufacture of FLX475 and RPT193. We cannot assure you that our preclinical or current or future clinical development product supplies and commercial supplies will not be limited or interrupted, especially with respect to our sole source third-party manufacturing and supply partners, or will be of satisfactory quality or continue to be available at acceptable prices. In particular, any replacement of our manufacturers could require significant effort and expertise because there may be a limited number of qualified replacements. For our current and future sole source third-party manufacturing and supply partners, we may be unable to negotiate binding agreements with them or find replacement manufacturers to support our preclinical and current and future clinical activities at commercially reasonable terms in the event that their services to us becomes interrupted for any reason. We do not always have arrangements in place for a redundant or second-source supply for our sole source vendors in the event they cease to provide their products or services to us or do not timely provide sufficient quantities to us. Establishing additional or replacement sole source vendors, if required, may not be accomplished quickly. Any delays resulting from manufacturing or supply interruptions associated with our reliance on third-party manufacturing and supply partners, including those that are sole source, could impede, delay, limit or prevent our drug development efforts, which could harm our business, result of operations, financial condition and prospects.

The manufacturing process for a drug candidate is subject to FDA and other regulatory authority review. Suppliers and manufacturers must meet applicable manufacturing requirements and undergo rigorous facility and process validation tests required by regulatory authorities in order to comply with regulatory standards, such as current Good Manufacturing Practices (“cGMP”). If any of our manufacturers fails to comply with such requirements or to perform its obligations to us in relation to quality, timing or otherwise, or if our supply of components or other materials becomes limited or interrupted for other reasons, we may be forced to manufacture the materials ourselves, for which we currently do not have the capabilities or resources, or enter into an agreement with another third party, which we may not be able to do on reasonable terms, or at all. In some cases, the technical skills or technology required to manufacture our current and future drug candidates may be unique or proprietary to the original manufacturer and we may have difficulty transferring such skills or technology to another third party and a feasible alternative may not exist. These factors would increase our reliance on such manufacturer or require us to obtain a license from such manufacturer in order to have another third-party manufacture our drug candidates. If we are required to change manufacturers for any reason, we will be required to verify that the new manufacturer maintains facilities and procedures that comply with quality standards and with all applicable regulations and guidelines. The delays associated with the verification of a new manufacturer could negatively affect our ability to develop drug candidates in a timely manner or within budget.

We also expect to rely on third-party manufacturers if we receive regulatory approval for any drug candidate. We have existing, and may enter into future, manufacturing arrangements with third parties. We will depend on these third parties to perform their obligations in a timely manner consistent with contractual and regulatory requirements, including those related to quality control and assurance. If we are unable to obtain or maintain third-party manufacturing for any drug candidate, or to do so on commercially reasonable terms, we may not be able to develop and commercialize our drug candidates successfully. Our or a third party’s failure to execute on our manufacturing requirements and comply with cGMP could adversely affect our business in a number of ways, including:

- an inability to initiate or continue clinical trials of drug candidates under development;
- delay in submitting regulatory applications, or receiving regulatory approvals, for drug candidates;
- loss of the cooperation of a potential future partner;
- subjecting third-party manufacturing facilities or our potential future manufacturing facilities to additional inspections by regulatory authorities;

- requirements to cease distribution or to recall batches of drug candidates; and
- in the event of approval to market and commercialize a drug candidate, an inability to meet commercial demands for our products.

Our third-party manufacturers may be unable to successfully scale manufacturing of FLX475, RPT193 or potential future drug candidates in sufficient quality and quantity, which would delay or prevent us from developing drug candidates and commercializing approved products, if any.

In order to conduct further clinical trials for FLX475 and RPT193, as well as any potential future drug candidates, we will need to manufacture large quantities of these drug candidates. We may continue to use third parties for our manufacturing needs. Our manufacturing partners may be unable to successfully increase the manufacturing capacity for any current or potential future drug candidate in a timely or cost-effective manner, or at all. In addition, quality issues may arise during scale-up activities. If our manufacturing partners are unable to successfully scale the manufacture of any current or potential future drug candidate in sufficient quality and quantity, the development, testing and clinical trials of that drug candidate may be delayed or infeasible, and regulatory approval or commercial launch of any potential resulting product may be delayed or not obtained, which could significantly harm our business.

If the market opportunities for our current and potential future drug candidates, including FLX475 and RPT193, are smaller than we believe they are, our ability to generate product revenues may be adversely affected and our business may suffer.

Our understanding of the number of people who suffer from certain types of cancers and allergic inflammatory diseases that FLX475 and RPT193, respectively, may have the potential to treat is based on estimates. These estimates may prove to be incorrect, and new studies may demonstrate or suggest a lower estimated incidence or prevalence of these diseases. The number of patients in the United States or elsewhere may turn out to be lower than expected, may not be otherwise amenable to treatment with our current or potential future drug candidates or patients may become increasingly difficult to identify and access, all of which would adversely affect our business prospects and financial condition. In particular, the treatable population for our candidates may further be reduced if our estimates of addressable populations are erroneous or sub-populations of patients do not derive benefit from FLX475 or RPT193.

Further, there are several factors that could contribute to making the actual number of patients who receive our current or potential future drug candidates less than the potentially addressable market, including the lack of widespread limited reimbursement for new therapies in many markets.

We face intense competition from entities that have developed or may develop drug candidates for the treatment of the diseases that we are currently targeting or may target in the future. If these companies develop technologies or drug candidates more rapidly than we do, or if their technologies or drug candidates are more effective, our ability to develop and successfully commercialize drug candidates may be adversely affected.

The development and commercialization of drugs and therapeutic biologics is highly competitive. We compete with a variety of large pharmaceutical companies, multinational biopharmaceutical companies, other biopharmaceutical companies and specialized biotechnology companies, as well as technology being developed at universities and other research institutions. Our competitors are often larger and better funded than we are. Our competitors have developed, are developing or will develop drug candidates and processes competitive with ours. Competitive therapeutic treatments include those that have already been approved and accepted by the medical community and any new treatments that are currently in development or that enter the market. We believe that a significant number of products are currently under development, and may become commercially available in the future, for the treatment of conditions for which we are developing or may try to develop drug candidates. There

is intense and rapidly evolving competition in the biotechnology, biopharmaceutical, immuno-oncology and inflammation fields.

We are aware of a number of companies that are developing biologics and small molecule drugs for the treatment of cancer and inflammatory diseases. Many of these companies are well-capitalized and, in contrast to us, have significant clinical experience, and may include our future partners. In addition, these companies compete with us in recruiting scientific and managerial talent. Our success will partially depend on our ability to obtain, maintain, enforce and defend patents and other intellectual property rights with respect to small molecule drugs or biologics that are safer and more effective than competing products. Our commercial opportunity and success will be reduced or eliminated if competing products that are safer, more effective, or less expensive than the drugs we develop are or become available.

We expect to compete with small molecule, biologics and other therapeutic platforms and development companies, including, but not limited to, companies such as ChemoCentryx, Tusk/Roche and Agenus/Gilead for oncology, and Dermira and AnaptysBio for inflammatory diseases. In addition, we expect to compete with large, multinational pharmaceutical companies that discover, develop and commercialize small molecule drugs and other therapeutics for use in treating cancer and inflammatory diseases such as AbbVie, Amgen, AstraZeneca plc, Bristol-Myers Squibb, GlaxoSmithKline, Incyte, Kyowa Hakko Kirin, Merck, Novartis, Pfizer, Roche/Genentech and Sanofi/Regeneron. If FLX475, RPT193 or other future drug candidate is eventually approved, it will compete with a range of treatments that are either in development or currently marketed.

Many of our competitors have significantly greater financial, technical, manufacturing, marketing, sales and supply resources or experience than we do. If we successfully obtain approval for any drug candidate, we will face competition based on many different factors, including the safety and effectiveness of our products, the ease with which our products can be administered, the timing and scope of regulatory approvals for these products, the availability and cost of manufacturing, marketing and sales capabilities, price, reimbursement coverage and patent position. Competing products could present superior treatment alternatives, including by being more effective, safer, less expensive or marketed and sold more effectively than any products we may develop. Competitive products may make any product we develop obsolete or noncompetitive before we recover the expense of developing and commercializing such product. Such competitors could also recruit our employees, which could negatively impact our level of expertise and our ability to execute our business plan.

Any inability to attract and retain qualified key management, technical personnel and employees would impair our ability to implement our business plan.

Our success largely depends on the continued service of key management, advisors and other specialized personnel, including Brian Wong, M.D., Ph.D., our President and Chief Executive Officer, Rodney Young, our Chief Financial Officer, William Ho, M.D., Ph.D., our Chief Medical Officer and Dirk Brockstedt, Ph.D., our Chief Scientific Officer, as well as our ability to attract and retain other highly qualified personnel. The loss of one or more members of our executive team, management team or other key employees or advisors could delay our research and development programs and have a material and adverse effect on our business, financial condition, results of operations and prospects.

The relationships that our key managers have cultivated within our industry make us particularly dependent upon their continued employment with us. We are dependent on the continued service of our technical personnel because of the highly technical nature of our drug candidates and technologies and the specialized nature of the regulatory approval process. Because our management team and key employees are not obligated to provide us with continued service, they could terminate their employment with us at any time without penalty.

Our future success will also depend in large part on our ability to attract and retain other highly qualified scientific, technical and management personnel, as well as personnel with expertise in clinical testing, manufacturing, governmental regulation and commercialization. We face significant competition for personnel

from other companies, universities, public and private research institutions, government entities and other organizations.

As of December 31, 2019, we had 67 full-time employees. Our focus on the development of FLX475, RPT193 and other potential future drug candidates will require adequate staffing. We may need to hire and retain new employees to execute our future clinical development and manufacturing plans. We cannot provide assurance that we will be able to hire or retain adequate staffing levels to develop our current and potential future drug candidates or to run our operations or to accomplish all of our objectives.

We may experience difficulties in managing our growth and expanding our operations.

We have limited experience in product development. As our current and potential future drug candidates enter and advance through preclinical studies and any clinical trials, we will need to expand our development, regulatory and manufacturing capabilities or contract with other organizations to provide these capabilities for us.

We may also experience difficulties in the discovery and development of potential future drug candidates using our drug discovery and development engine if we are unable to meet demand as we grow our operations. In the future, we also expect to have to manage additional relationships with collaborators, suppliers and other organizations. Our ability to manage our operations and future growth will require us to continue to improve our operational, financial and management controls, reporting systems and procedures and secure adequate facilities for our operational needs. We may not be able to implement improvements to our management information and control systems in an efficient or timely manner and may discover deficiencies in existing systems and controls.

If any of our drug candidates is approved for marketing and commercialization in the future and we are unable to develop sales, marketing and distribution capabilities on our own or enter into agreements with third parties to perform these functions on acceptable terms, we will be unable to successfully commercialize any such future products.

We currently have no sales, marketing or distribution capabilities or experience. We will need to develop internal sales, marketing and distribution capabilities to commercialize each current and potential future drug candidate that gains FDA approval, which would be expensive and time-consuming, or enter into partnerships with third parties to perform these services. If we decide to market any approved products directly, we will need to commit significant financial and managerial resources to develop a marketing and sales force with technical expertise and supporting distribution, administration and compliance capabilities. If we rely on third parties with such capabilities to market any approved products or decide to co-promote products with partners, we will need to establish and maintain marketing and distribution arrangements with third parties, and there can be no assurance that we will be able to enter into such arrangements on acceptable terms or at all. In entering into third-party marketing or distribution arrangements, any revenue we receive will depend upon the efforts of the third parties and we cannot assure you that such third parties will establish adequate sales and distribution capabilities or be successful in gaining market acceptance for any approved product. If we are not successful in commercializing any product approved in the future, either on our own or through third parties, our business and results of operations could be materially and adversely affected.

Our present and potential future international operations may expose us to business, political, operational, and financial risks associated with doing business outside of the United States.

Our business is subject to risks associated with conducting business internationally. Some of our suppliers and clinical trial centers are located outside of the United States, and we recently entered into an agreement with Hanmi with respect to clinical development and other activities in the Hanmi Territory. Furthermore, if we or any future collaborator succeeds in developing any products, we anticipate marketing them in the European Union and other jurisdictions in addition to the United States. If approved, we or our collaborator

may hire sales representatives and conduct physician and patient association outreach activities outside of the United States. 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;
- rejection or qualification of foreign clinical trial data by the competent authorities of other countries;
- additional potentially relevant third-party patent and other intellectual property rights that may be necessary to develop and commercialize our products and drug candidates;
- complexities and difficulties in obtaining, maintaining, enforcing and defending our patent and other intellectual property rights;
- 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, implementation of tariffs;
- certain expenses including, among others, expenses for travel, translation and insurance; and
- regulatory and compliance risks that relate to anti-corruption compliance and record-keeping that may fall within the purview of the U.S. Foreign Corrupt Practices Act, its accounting provisions or its anti-bribery provisions or provisions of anti-corruption or anti-bribery laws in other countries.

Any of these factors could harm our ongoing international clinical operations and supply chain, as well as any future international expansion and operations and, consequently, our business, financial condition, prospects and results of operations.

Our future growth may depend, in part, on our ability to operate in foreign markets, where we would be subject to additional regulatory burdens and other risks and uncertainties.

Our future growth may depend, in part, on our ability to develop and commercialize drug candidates in foreign markets for which we may rely on partnering with third parties. We will not be permitted to market or promote any drug candidate before we receive regulatory approval from the applicable regulatory authority in a foreign market, and we may never receive such regulatory approval for any drug candidate. To obtain separate regulatory approval in foreign countries, we generally must comply with numerous and varying regulatory

requirements of such countries regarding safety and efficacy and governing, among other things, clinical trials and commercial sales, pricing and distribution of a drug candidate, and we cannot predict success in these jurisdictions. If we obtain approval of any of our current or potential future drug candidates and ultimately commercialize any such drug candidate in foreign markets, we would be subject to risks and uncertainties, including the burden of complying with complex and changing foreign regulatory, tax, accounting and legal requirements and the reduced protection of intellectual property rights in some foreign countries.

Price controls imposed in foreign markets may adversely affect our future profitability.

In some countries, particularly member states 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 receipt of marketing approval for a product. In addition, there can be considerable pressure exerted by governments and other stakeholders on prices and reimbursement levels, including as part of cost-containment measures. Political, economic and regulatory developments, in the United States or internationally, may further complicate pricing negotiations, and pricing negotiations may continue after reimbursement has 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. In some countries, we or future partners may be required to conduct clinical trials or other studies that compare the cost-effectiveness of a drug candidate to other available therapies in order to obtain or maintain reimbursement or pricing approval. Publication of discounts by third-party payors or authorities may lead to further pressure on the prices or reimbursement levels within the country of publication and other countries. If reimbursement of any current or potential future drug candidate that is approved for marketing in the future is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business and results of operations or prospects could be materially and adversely affected and our ability to commercialize such drug candidate could be materially impaired.

Our business entails a significant risk of product liability, and our inability to obtain sufficient insurance coverage could have a material and adverse effect on our business, financial condition, results of operations and prospects.

As we conduct clinical trials of FLX475 and RPT193, we will be exposed to significant product liability risks inherent in the development, testing, manufacturing and marketing of cancer and inflammatory disease treatments. Product liability claims could delay or prevent completion of our development programs. If we succeed in marketing products, such claims could result in an FDA investigation of the safety and effectiveness of our products, our manufacturing processes and facilities or our marketing programs and potentially a recall of our products or more serious enforcement action, limitations on the approved indications for which they may be used or suspension or withdrawal of approvals. Regardless of the merits or eventual outcome, liability claims may also result in decreased demand for our products, injury to our reputation, costs to defend the related litigation, a diversion of management's time and our resources, substantial monetary awards to trial participants or patients and a decline in our stock price. Any insurance we have or may obtain may not provide sufficient coverage against potential liabilities. Furthermore, clinical trial and product liability insurance is becoming increasingly expensive. As a result, our partners or we may be unable to obtain sufficient insurance at a reasonable cost to protect us against losses caused by product liability claims that could have a material and adverse effect on our business, financial condition, results of operations and prospects.

Our employees, principal investigators, consultants and commercial partners may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

We are exposed to the risk of fraud or other misconduct by our employees, principal investigators, consultants and commercial partners. Misconduct by employees could include intentional failures to comply with FDA regulations, provide accurate information to the FDA, comply with manufacturing standards we may establish, comply with federal and state healthcare fraud and abuse laws and regulations, report financial

information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Such misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. It is not always possible to identify and deter misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a material and adverse effect on our business and financial condition, including the imposition of significant criminal, civil, and administrative fines or other sanctions, such as monetary penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in government-funded healthcare programs, such as Medicare and Medicaid, integrity obligations, reputational harm and the curtailment or restructuring of our operations.

Failure to comply with health and data protection laws and regulations could lead to government enforcement actions (which could include civil or criminal penalties), private litigation or adverse publicity and could negatively affect our operating results and business.

We and our current and any of our future collaborators may be subject to federal, state and foreign data protection laws and regulations (i.e., laws and regulations that address privacy and data security). In the United States, numerous federal and state laws and regulations, including federal health information privacy laws (e.g., the Health Insurance Portability and Accountability Act ("HIPAA"), as amended by the Health Information Technology for Economic and Clinical Health Act ("HITECH")), state data breach notification laws, state health information privacy laws and federal and state consumer protection laws (e.g., Section 5 of the Federal Trade Commission Act), that govern the collection, use, disclosure and protection of health-related and other personal information could apply to our operations or the operations of our collaborators. In addition, we may obtain health information from third parties (including research institutions from which we obtain clinical trial data) that are subject to privacy and security requirements under HIPAA, as amended by HITECH, or other privacy and data security laws. Depending on the facts and circumstances, we could be subject to criminal penalties if we knowingly obtain, use, or disclose individually identifiable health information maintained by a HIPAA-covered entity in a manner that is not authorized or permitted by HIPAA.

International data protection laws, including Regulation 2016/679, known as the General Data Protection Regulation ("GDPR") may also apply to health-related and other personal information obtained outside of the United States. The GDPR went into effect on May 25, 2018. The GDPR introduced new data protection requirements in the European Union, as well as potential fines for noncompliant companies of up to the greater of €20 million or 4% of annual global revenue. The regulation imposes numerous new requirements for the collection, use, storage and disclosure of personal information, including more stringent requirements relating to consent and the information that must be shared with data subjects about how their personal information is used, the obligation to notify regulators and affected individuals of personal data breaches, extensive new internal privacy governance obligations and obligations to honor expanded rights of individuals in relation to their personal information (e.g., the right to access, correct and delete their data). In addition, the GDPR includes restrictions on cross-border data transfers. The GDPR increased our responsibility and liability in relation to personal data that we process where such processing is subject to the GDPR, and we may be required to put in place additional mechanisms to ensure compliance with the GDPR, including as implemented by individual countries. Further, the United Kingdom's vote in favor of exiting the EU, often referred to as Brexit, has created uncertainty with regard to data protection regulation in the United Kingdom. In particular, it is unclear how data transfers to and from the United Kingdom will be regulated.

In addition, California recently enacted the California Consumer Privacy Act ("CCPA"), which creates new individual privacy rights for California consumers (as defined in the law) and places increased privacy and

security obligations on entities handling personal data of consumers or households. The CCPA requires covered companies to provide new disclosure to consumers about such companies' data collection, use and sharing practices, provide such consumers new ways to opt-out of certain sales or transfers of personal information, and provide consumers with additional causes of action. The CCPA took effect on January 1, 2020, and the California Attorney General may bring enforcement actions for violations beginning July 1, 2020. The CCPA was amended in September 2018 and November 2019, and it remains unclear what, if any, further modifications will be made to this legislation or how it will be interpreted. As currently written, the CCPA may impact our business activities and exemplifies the vulnerability of our business to the evolving regulatory environment related to personal data and protected health information.

Compliance with U.S. and international data protection laws and regulations could require us to take on more onerous obligations in our contracts, restrict our ability to collect, use and disclose data, or in some cases, impact our ability to operate in certain jurisdictions. Failure to comply with U.S. and international data protection laws and regulations could result in government enforcement actions (which could include civil or criminal penalties), private litigation or adverse publicity and could negatively affect our operating results and business. Moreover, clinical trial subjects about whom we or any of our potential collaborators obtain information, as well as the providers who share this information with us, may contractually limit our ability to use and disclose the information. Claims that we have violated individuals' privacy rights, failed to comply with data protection laws, or breached our contractual obligations, even if we are not found liable, could be expensive and time consuming to defend and could result in adverse publicity that could harm our business.

If we, our CROs or our IT vendors experience security or data privacy breaches or other unauthorized or improper access to, use of, or destruction of personal data, we may face costs, significant liabilities, harm to our brand and business disruption.

In connection with our drug discovery and development engine and efforts, we or our CROs may collect and use a variety of personal data, such as name, mailing address, email addresses, phone number and clinical trial information. Although we have extensive measures in place to prevent the sharing and loss of patient data in our sample collection process associated with our drug discovery and development engine, any failure to prevent or mitigate security breaches or improper access to, use of, or disclosure of our clinical data or patients' personal data could result in significant liability under state (e.g., breach notification laws), federal (e.g., HIPAA, as amended by HITECH), and international law (e.g., the GDPR). Any failure to prevent or mitigate security breaches or improper access to, use of, or disclosure of our clinical data or patients' personal data may cause a material adverse impact to our reputation, affect our ability to conduct new studies and potentially disrupt our business. We may also rely on third-party IT vendors to host or otherwise process some of our data and that of users, and any failure by such IT vendor to prevent or mitigate security breaches or improper access to or disclosure of such information could have similarly adverse consequences for us. If we are unable to prevent or mitigate the impact of such security or data privacy breaches, we could be exposed to litigation and governmental investigations, which could lead to a potential disruption to our business.

We depend on sophisticated information technology systems to operate our business and a cyber-attack or other breach of these systems could have a material adverse effect on our business.

We rely on information technology systems that we or our CROs or other vendors, contractors or consultants operate to process, transmit and store electronic information in our or their day-to-day operations. The size and complexity of such information technology systems makes them vulnerable to a cyber-attack, malicious intrusion, breakdown, destruction, loss of data privacy or other significant disruption. A successful attack could result in the theft or destruction of intellectual property, data, or other misappropriation of assets, or otherwise compromise our confidential or proprietary information and disrupt our operations. Cyber-attacks are becoming more sophisticated and frequent. We have invested in our systems and the protection and recoverability of our data to reduce the risk of an intrusion or interruption, and we monitor and test our systems on an ongoing basis for any current or potential threats. There can be no assurance that these measures and

efforts will prevent future interruptions or breakdowns. If we or our CROs or other vendors, contractors or consultants fail to maintain or protect our information technology systems and data integrity effectively or fail to anticipate, plan for or manage significant disruptions to these systems, we or they could have difficulty preventing, detecting and controlling such cyber-attacks and any such attacks could result in losses described above as well as disputes with physicians, patients and our partners, regulatory sanctions or penalties, increases in operating expenses, expenses or lost revenues or other adverse consequences, any of which could have a material adverse effect on our business, results of operations, financial condition, prospects and cash flows.

Our information technology and other internal infrastructure systems, including corporate firewalls, servers, leased lines and connection to the internet, face the risk of systemic failure that could disrupt our operations. A significant disruption in the availability of our information technology and other internal infrastructure systems could cause interruptions and delays in our research and development work.

If we do not comply with laws regulating the protection of the environment and health and human safety, our business could be adversely affected.

Our research, development and manufacturing involve the use of hazardous materials and various chemicals. We maintain quantities of various flammable and toxic chemicals in our facilities that are required for our research, development and manufacturing activities. We are subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of these hazardous materials. We believe our procedures for storing, handling and disposing of these materials in our facilities comply with the relevant guidelines of the state of California and the Occupational Safety and Health Administration of the U.S. Department of Labor. Although we believe that our safety procedures for handling and disposing of these materials comply with the standards mandated by applicable regulations, the risk of accidental contamination or injury from these materials cannot be eliminated. If an accident occurs, we could be held liable for resulting damages, which could be substantial. We are also subject to numerous environmental, health and workplace safety laws and regulations, including those governing laboratory procedures, exposure to blood-borne pathogens and the handling of animals and biohazardous materials. 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 these materials, this insurance may not provide adequate coverage against potential liabilities. Although we have some environmental liability insurance covering certain of our facilities, we may not maintain adequate insurance for all environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological or hazardous materials. Additional federal, state and local laws and regulations affecting our operations may be adopted in the future. We may incur substantial costs to comply with, and substantial fines or penalties if we violate, any of these laws or regulations.

Our current operations are concentrated in one location, and we or the third parties upon whom we depend may be adversely affected by natural or other disasters and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Our current operations are concentrated in the San Francisco Bay Area. Any unplanned event, such as earthquake, flood, fire, explosion, extreme weather, medical epidemic, power shortage, telecommunication failure or other natural or manmade accidents or incidents that result in us being unable to fully utilize our facilities or the manufacturing facilities of our third-party contract manufacturers, or lose our repository of preclinical and clinical human samples and other valuable laboratory samples, may have a material and adverse effect on our ability to operate our business, particularly on a daily basis, and have significant negative consequences on our financial and operating conditions. Loss of access to these facilities may result in increased costs, delays in the development of our drug candidates or interruption of our business operations. Natural disasters such as earthquakes or wildfires, both of which are prevalent in Northern California, floods or tsunamis could further disrupt our operations, and have a material negative impact on our business, financial condition, results of operations and prospects. If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters, that damaged critical infrastructure, such as our

research facilities or the manufacturing facilities of our third-party contract manufacturers, or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible, for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have in place may prove inadequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which could have a material adverse effect on our business. As part of our risk management policy, we maintain insurance coverage at levels that we believe are appropriate for our business. However, in the event of an accident or incident at these facilities, we cannot assure you that the amounts of insurance will be sufficient to satisfy any damages and losses. If our facilities, or the manufacturing facilities of our third-party contract manufacturers, are unable to operate because of an accident or incident or for any other reason, even for a short period of time, any or all of our research and development programs may be harmed. Any business interruption may have a material and adverse effect on our business and financial condition.

Risks Related to Our Intellectual Property

If we are unable to obtain, maintain, enforce or defend intellectual property rights related to our technology and current or future drug candidates, or if our intellectual property rights are inadequate, we may not be able to compete effectively.

Our success depends in large part on our ability to obtain and maintain protection in the United States and other countries for our intellectual property rights and proprietary technology. We rely on patents and other forms of intellectual property rights to protect our current or future drug discovery and development engine, drug candidates, methods used to manufacture our current or future drug candidates, and methods for treating patients using our current or future drug candidates. We do not currently own any patents or patent applications relating to our proprietary drug discovery and development engine.

The patent prosecution process is expensive, complex and time-consuming. Patent license negotiations also can be complex and protracted, with uncertain results. We may not be able to file, prosecute, maintain, enforce or license all necessary or desirable patents and patent applications at a reasonable cost or in a timely manner. 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. Although we enter into non-disclosure and confidentiality agreements with parties who have access to confidential or patentable aspects of our research and development output, such as our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors, and other third parties, any of these parties may breach the agreements and disclose such output before a patent application is filed, thereby jeopardizing our ability to seek patent protection. The patent applications that we own or may in-license may fail to result in issued patents, and, even if they do issue as patents, such patents may not cover our current or future technologies or drug candidates in the United States or in other countries or provide sufficient protection from competitors. In addition, the coverage claimed in a patent application can be significantly reduced before the patent is issued and its scope can be reinterpreted after issuance.

Further, although we make reasonable efforts to ensure patentability of our inventions, we cannot guarantee that all of the potentially relevant prior art relating to our patent applications and any issued patents we obtain has been found. For example, publications of discoveries in 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, and in some cases not at all. Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our drug discovery and development engine, our drug candidates or the use of our technologies. We thus cannot know with certainty whether we or any of our future licensors were the first to make the inventions claimed in our pending patent applications or any issued patents we obtain, or that we or our any of our future licensors were the first to file for patent protection of such inventions. For this reason, and because there is no guarantee that any prior art search is absolutely correct and comprehensive, we may be unaware of prior art that could be used to invalidate an issued

patent or to prevent our pending patent applications from issuing as patents. Invalidation of any of our patent rights, including in-licensed patent rights, could materially harm our business, financial condition, results of operations and prospects.

Moreover, the patent positions of biopharmaceutical companies are generally uncertain because they may involve complex legal and factual considerations that have, in recent years, been the subject of legal development and change. As a result, the issuance, scope, validity, enforceability and commercial value of our pending patent rights is uncertain. The standards applied by the United States Patent and Trademark Office ("USPTO"), and foreign patent offices in granting patents are not always certain and moreover, are not always applied uniformly or predictably. For example, there is no uniform worldwide policy regarding patentable subject matter or the scope of claims allowable in patents. 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 patent rights or narrow the scope of our patent protection.

Even if patents do successfully issue and even if such patents cover our current or any future technologies or drug candidates, third parties may challenge their validity, enforceability or scope, which may result in such patents being narrowed, invalidated, or held unenforceable. Any successful challenge to any patents we own or may in-license could deprive us of rights necessary for the successful commercialization of any current or future technologies or drug candidates that we may develop. Likewise, if patent applications we own or may in-license with respect to our development programs and current or future technologies or drug candidates fail to issue, if their breadth or strength is threatened, or if they fail to provide meaningful exclusivity, other companies could be dissuaded from collaborating with us to develop current or future technologies or drug candidates. Lack of valid and enforceable patent protection could threaten our ability to commercialize current or future products and could prevent us from maintaining exclusivity with respect to the invention or feature claimed in the patent applications. Any failure to obtain or any loss of patent protection could have a material adverse impact on our business and ability to achieve profitability. We may be unable to prevent competitors from entering the market with a product that is similar to or the same as FLX475, RPT193 or other future drug candidates that emerge from our discovery program.

The filing of a patent application or the issuance of a patent is not conclusive as to its ownership, inventorship, scope, patentability, validity or enforceability. Issued patents and patent applications may be challenged in the courts and in the patent office in the United States and abroad. For example, our patent applications or patent applications filed by any of our future licensors may be challenged through third-party submissions, opposition or derivation proceedings. By further example, issued patents may be challenged through reexamination, inter partes review or post-grant review proceedings before the USPTO or patent offices in other jurisdictions, or in declaratory judgment actions or counterclaims. An adverse determination in any such submission, proceeding or litigation could prevent the issuance of, reduce the scope of, invalidate or render unenforceable our patent rights; limit our ability to stop others from using or commercializing similar or identical products; allow third parties to 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 patent rights is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future drug candidates. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

Moreover, some of our intellectual property, including patents and patent applications, are or may in the future be co-owned with third parties. If we are unable to obtain an exclusive license to any such third-party co-owners' interest in such intellectual property, including patents or patent applications, such co-owners may be able to license their rights to other third parties, including our competitors, and our competitors could market competing products and technology. We may need the cooperation of any such co-owners of our patent rights to enforce such patent rights against third parties, and such cooperation may not be provided to us. Any of the foregoing could have a material adverse effect on our competitive position, business prospects and financial conditions.

If we fail to comply with our obligations under any license, collaboration or other intellectual property-related agreements, we may be required to pay damages and could lose intellectual property rights that may be necessary for developing, commercializing and protecting our current or future technologies or drug candidates or we could lose certain rights to grant sublicenses.

Any license, collaboration or other intellectual property-related agreements impose, and any future license, collaboration or other intellectual property-related agreements we enter into are likely to impose, various development, commercialization, funding, milestone, royalty, diligence, sublicensing, insurance, patent prosecution and enforcement or other obligations on us. If we breach any of these obligations, or use the intellectual property licensed to us in an unauthorized manner, we may be required to pay damages and the licensor may have the right to terminate the license. In spite of our best efforts, any of our future licensors might conclude that we have materially breached our license agreements and might therefore terminate the license agreements, thereby removing our ability to develop and commercialize products and technologies covered by these license agreements. Any license agreements we enter into may be complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope our rights to the relevant intellectual property or technology, or increase what we believe to be our financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

We may seek to obtain licenses from licensors in the future, however, we may be unable to obtain any such licenses at a reasonable cost or on reasonable terms, if at all. In addition, if any of our future licensors terminate any such license agreements, such license termination could result in our inability to develop, manufacture and sell products that are covered by the licensed technology or could enable a competitor to gain access to the licensed technology. Any of these events could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and ability to achieve profitability.

Furthermore, we may not have the right to control the preparation, filing, prosecution, maintenance, enforcement and defense of patents and patent applications that we license from third parties. Therefore, we cannot be certain that these patents and patent applications will be prepared, filed, prosecuted, maintained, enforced and defended in a manner consistent with the best interests of our business. If our future licensors fail to prosecute, maintain, enforce and defend patents we may in-license, or lose rights to licensed patents or patent applications, our license rights may be reduced or eliminated. In such circumstances, our right to develop and commercialize any of our products or drug candidates that is the subject of such licensed rights could be materially adversely affected. In certain circumstances, our licensed patent rights are subject to our reimbursing our licensors for their patent prosecution and maintenance costs.

Moreover, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing, misappropriating or otherwise violating the licensor's intellectual property rights and the amount of any damages or future royalty obligations that would result if any such claims were successful would depend on the technology and intellectual property we use in products that we successfully develop and commercialize, if any. Therefore, even if we successfully develop and commercialize products, we may be unable to achieve or maintain profitability.

Patent terms may not be able to protect our competitive position for an adequate period of time with respect to our current or future technologies or drug candidates.

Patents have a limited lifespan. In the United States, the standard patent term is typically 20 years after filing. Various extensions may be available. Even so, the life of a patent and the protection it affords are limited. As a result, our patent portfolio provides us with limited rights that may not last for a sufficient period of time to exclude others from commercializing products similar or identical to ours. For example, given the large amount of time required for the research, development, testing and regulatory review of new drug candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized.

Extensions of patent term may be available, but there is no guarantee that we would succeed in obtaining any particular extension—and no guarantee any such extension would lengthen the patent term for a sufficient period of time to exclude others from commercializing products similar or identical to ours. In the United States, the Drug Price Competition and Patent Term Restoration Act of 1984 permits a patent term extension of up to five years beyond the normal expiration of the patent, which is limited to the approved indication (or any additional indications approved during the period of extension). A patent term extension cannot extend the remaining term of a patent beyond 14 years from the date of product approval; only one patent may be extended; and extension is available for only those claims covering the approved drug, a method for using it, or a method for manufacturing it. The applicable authorities, including the FDA and the USPTO in the United States, and any equivalent regulatory authority in other countries, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to any patents we obtain, or may grant more limited extensions than we request. An extension may not be granted or may be limited where there is, for example, a failure to exercise due diligence during the testing phase or regulatory review process, failure to apply within applicable deadlines, failure to apply before expiration of relevant patents, or some other failure to satisfy applicable requirements. If this occurs, our competitors may be able to launch their products earlier by taking advantage of our investment in development and clinical trials along with our clinical and preclinical data. This could have a material adverse effect on our business and ability to achieve profitability.

Changes in U.S. patent law or the patent law of other countries or jurisdictions could diminish the value of patents in general, thereby impairing our ability to protect our current or any future technologies or drug candidates.

Changes in either the patent laws or interpretation of the patent laws in the United States or elsewhere could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. The United States has enacted and implemented wide-ranging patent reform legislation. In 2011, the Leahy-Smith America Invents Act (the “Leahy-Smith Act”), was signed into law, which could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of any issued patents we obtain. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted, redefine prior art, may affect patent litigation and switch the U.S. patent system from a “first-to-invent” system to a “first-to-file” system. Under a first-to-file system, assuming the other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to the patent on an invention regardless of whether another inventor had made the invention earlier. These provisions also allow third-party submission of prior art to the USPTO during patent prosecution and set forth additional procedures to challenge the validity of a patent by the USPTO administered post grant proceedings, including derivation, reexamination, inter partes review, post-grant review and interference proceedings. The USPTO developed additional 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, and, in particular, the first-to-file provisions, became effective in 2013. Accordingly, it is not clear what, if any, impact the Leahy-Smith Act will have on the operation of our business. 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 any issued patents we obtain, all of which could have a material adverse impact on our business prospects and financial condition.

As referenced above, for example, courts in the U.S. continue to refine the heavily fact-and-circumstance-dependent jurisprudence defining the scope of patent protection available for therapeutics, narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. This creates uncertainty about our ability to obtain patents in the future and the value of such patents. We cannot provide assurance that future developments in U.S. Congress, the federal courts and the USPTO will not adversely impact our patent rights. The laws and regulations governing patents could change in unpredictable ways that could weaken our and our licensors’ ability to obtain new patents or to enforce our existing patent rights or patent rights that we might obtain or in-license in the future. Similarly, changes in patent law and regulations in other countries or jurisdictions or changes in the governmental bodies that enforce them or

changes in how the relevant governmental authority enforces patent laws or regulations may have a material adverse effect on our and our licensors' ability to obtain new patents or to protect and enforce our owned or in-licensed patent rights or patent rights that we may obtain or in-license in the future.

Other companies or organizations may challenge our patent rights or may assert patent rights that prevent us from developing and commercializing our current or future products.

Third parties may attempt to invalidate our intellectual property rights. Even if such rights are not directly challenged, disputes could lead to the weakening of our intellectual property rights. Our defense against any attempt by third parties to circumvent or invalidate our intellectual property rights could be costly to us, could require significant time and attention of our management, and could have a material and adverse impact on our profitability, financial condition and prospects or ability to successfully compete.

Further, we cannot guarantee that we are aware of all patents and patent applications potentially relevant to our technology or products. There may be issued and pending patents that claim aspects of our current or potential future drug candidates and modifications that we may need for our current or potential future drug candidates. We may not be aware of potentially relevant third-party patents or applications for several reasons. For example, U.S. applications filed before November 29, 2000, and certain U.S. applications filed after that date that will not be filed outside the U.S. remain confidential until patents issue. Patent applications in the United States and elsewhere are published approximately 18 months after the earliest filing for which priority is claimed, with such earliest filing date being commonly referred to as the priority date. Therefore, patent applications covering our drug candidates or technologies could have been filed by others without our knowledge. Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our drug candidates or the use of our technologies.

We may be subject to priority disputes, inventorship disputes and similar proceedings that could, if resolved unfavorably, narrow the scope of our intellectual property protection. We cannot provide any assurances that third-party patents do not exist that might be enforced against our drug candidates or technologies or future methods or products, resulting in either an injunction prohibiting our manufacture or sales, or, with respect to our sales, an obligation on our part to pay royalties or other forms of compensation to third parties, which could be significant.

Thus, it is possible that one or more third parties will hold patent rights to which we will need a license, which may not be available on reasonable terms or at all. If such third parties refuse to grant us a license to such patent rights on reasonable terms or at all, we may be required to expend significant time and resources to redesign our technology, drug candidates or the methods for manufacturing our drug candidates, or to develop or license replacement technology, all of which may not be commercially or technically feasible. In such case, we may not be able to market such technology or drug candidates and may not be able to perform research and development or other activities covered by these patents. This could have a material adverse effect on our ability to commercialize our drug candidates and our business and financial condition.

We may not be able to protect our intellectual property rights throughout the world, which could negatively impact our business.

Filing, prosecuting and defending patents on current or future technologies or drug candidates in all countries throughout the world would be prohibitively expensive. Competitors or other third parties may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export infringing products to territories where we have patent protection or licenses but enforcement is not as strong as that in the United States. These products may compete with our products, and our patent or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Additionally, the laws of some foreign jurisdictions do not protect intellectual property rights to the same extent as the laws in the United States. Consequently, we may not be able to prevent third parties from

practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Many companies have encountered significant difficulties in protecting and defending intellectual property rights in such foreign jurisdictions. The legal systems of certain countries, including certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, particularly those relating to biotechnology, which could make it difficult for us to stop the infringement of our patent rights or the marketing of competing products in violation of our intellectual property and proprietary rights generally. Proceedings to enforce our intellectual property and proprietary rights in foreign jurisdictions could result in substantial costs and could divert our efforts and attention from other aspects of our business. Such proceedings could also put our patent rights at risk of being invalidated or interpreted narrowly, could put our patent applications at risk of not issuing, and could provoke third parties to assert claims against us or any of our future licensors. We may not prevail in any lawsuits or other adversarial proceedings that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce such intellectual property and proprietary rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or in-license.

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

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

Our commercial success depends, in part, upon our ability or the ability of any of our future collaborators to develop, manufacture, market and sell our current or any future drug candidates and to use our proprietary technologies without infringing, misappropriating or otherwise violating the proprietary and intellectual property rights of third parties. The biotechnology and pharmaceutical industries are characterized by extensive and complex litigation regarding patents and other intellectual property rights.

We or any of our future licensors or strategic partners, may be party to, or be threatened with, adversarial proceedings or litigation regarding intellectual property rights with respect to our current or any potential future drug candidates and technologies, including derivation, reexamination, inter partes review, post-grant review or interference proceedings before the USPTO and similar proceedings in jurisdictions outside of the United States, such as opposition proceedings. If we or our licensors or strategic partners are unsuccessful in any interference proceedings or other priority or validity disputes (including through any patent oppositions) to which we or they are subject, we may lose valuable intellectual property rights through the loss of one or more patents or our patent claims may be narrowed, invalidated, or held unenforceable. In some instances, we may be required to indemnify our licensors or strategic partners for the costs associated with any such adversarial proceedings or litigation. Third parties may also assert infringement, misappropriation or other claims against us, our licensors or our strategic partners based on existing patents or patents that may be granted in the future, as well as other intellectual property rights, regardless of their merit. There is a risk that third parties may choose to engage in litigation or other adversarial proceedings with us, our licensors or our strategic partners to enforce or otherwise assert their patent rights or other intellectual property rights. Even if we believe such claims are without merit, a court of competent jurisdiction could hold that these third-party patents and other intellectual property rights are valid, enforceable and infringed, which could have a material adverse impact on our ability to utilize our drug discovery and development engine or to commercialize our current or any future drug candidates. In order to successfully challenge the validity of any such U.S. patent in federal court, we would need to

overcome a presumption of validity by presenting clear and convincing evidence of invalidity. There is no assurance that a court of competent jurisdiction, even if presented with evidence we believe to be clear and convincing, would invalidate the claims of any such U.S. patent.

Further, we cannot guarantee that we will be able to successfully settle or otherwise resolve such adversarial proceedings or litigation. If we are unable to successfully settle future claims on terms acceptable to us, we may be required to engage in or to continue costly, unpredictable and time-consuming litigation and may be prevented from or experience substantial delays in marketing our drug candidates. If we or any of our licensors or strategic partners are found to infringe, misappropriate or violate a third-party patent or other intellectual property rights, we could be required to pay damages, including treble damages and attorney's fees, if we are found to have willfully infringed. In addition, we, or any of our licensors or strategic partners, may choose to seek, or be required to seek, a license from a third party, which may not be available on commercially reasonable terms, if at all. Even if a license can be obtained on commercially reasonable terms, the rights may be non-exclusive, which could give our competitors access to the same technology or intellectual property rights licensed to us, and we could be required to make substantial licensing and royalty payments. We also could be forced, including by court order, to cease utilizing, developing, manufacturing and commercializing our drug discovery and development engine or drug candidates deemed to be infringing. We may be forced to redesign current or future technologies or products. Any of the foregoing could have a material adverse effect on our ability to generate revenue or achieve profitability and possibly prevent us from generating revenue sufficient to sustain our operations.

In addition, we or our licensors or strategic partners may find it necessary to pursue claims or to initiate lawsuits to protect or enforce our patent or other intellectual property rights. If we or our licensors or strategic partners were to initiate legal proceedings against a third party to enforce a patent covering one of our drug candidates or our technology, the defendant could counterclaim that such patent is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, for example, claiming patent-ineligible subject matter, lack of novelty, indefiniteness, lack of written description, non-enablement, anticipation or obviousness. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO or made a misleading statement during prosecution. The outcome of such invalidity and unenforceability claims is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art of which we or our licensors or strategic partners and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity or unenforceability, we could lose at least part, and perhaps all, of the patent protection for one or more of our drug candidates. The narrowing or loss of our owned and licensed patent claims could limit our ability to stop others from using or commercializing similar or identical technology and products. All of these events could have a material adverse effect on our business, financial condition, results of operations and prospects. Patent and other intellectual property rights also will not protect our drug candidates and technologies if competitors or third parties design around such drug candidates and technologies without legally infringing, misappropriating or violating our patent or other intellectual property rights.

The cost to us in defending or initiating any litigation or other proceeding relating to our patent or other intellectual property rights, even if resolved in our favor, could be substantial, and any litigation or other proceeding would divert our management's attention and distract our personnel from their normal responsibilities. Such litigation or proceedings could materially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Some of our competitors may be able to more effectively sustain the costs of complex patent litigation because they have substantially greater resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could delay our research and development efforts and materially limit our ability to continue our operations. Furthermore, because of the substantial amount of discovery required in connection with certain

such proceedings, there is a risk that some of our confidential information could be compromised by disclosure. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, such announcements could have a material adverse effect on the price of our common stock.

Intellectual property rights of third parties could adversely affect our ability to commercialize our current or future technologies or drug candidates, and we might be required to litigate or obtain licenses from third parties to develop or market our current or future technologies or drug candidates, which may not be available on commercially reasonable terms or at all.

Because the immuno-oncology and inflammation disease landscapes are still evolving, it is difficult to conclusively assess our freedom to operate. Thus, we may unknowingly pursue development of a product or technology that infringes, misappropriates or otherwise violates third-party rights. There are numerous companies that have pending patent applications and issued patents broadly covering immune-therapies generally or covering small molecules directed against the same targets as, or targets similar to, those we are pursuing. Our competitive position may materially suffer if patents issued to third parties or other third-party intellectual property rights cover our current or future technologies, drug candidates or elements thereof or our manufacture or uses relevant to our development plans. In such cases, we may not be in a position to develop or commercialize current or future technologies, drug candidates or elements thereof unless we successfully pursue litigation to nullify or invalidate the third-party intellectual property right concerned, or enter into a license agreement with the intellectual property right holder, if available on commercially reasonable terms. There may be issued patents of which we are not aware, held by third parties, that, if found to be valid and enforceable, could be alleged to be infringed by our current or future technologies or drug candidates. There also may be pending patent applications of which we are not aware that may result in issued patents, which could be alleged to be infringed by our current or future technologies or drug candidates. Should such an infringement claim be successfully brought, we may be required to pay substantial damages or be forced to abandon our current or future technologies or drug candidates or to seek a license from any patent holders. No assurances can be given that a license will be available on commercially reasonable terms, if at all.

Third-party intellectual property right holders may also actively bring infringement, misappropriation or other claims alleging violations of intellectual property rights against us. We cannot guarantee that we will be able to successfully settle or otherwise resolve such claims. If we are unable to successfully settle future claims on terms acceptable to us, we may be required to engage in or to continue costly, unpredictable and time-consuming litigation and may be prevented from or experience substantial delays in marketing our drug candidates. If we fail in any such dispute, in addition to being forced to pay damages, we may be temporarily or permanently prohibited from commercializing any of our current or future technologies or drug candidates that are held to be infringing, misappropriating or otherwise violating third-party intellectual property rights. We might, if possible, also be forced to redesign current or future technologies or drug candidates so that we no longer infringe, misappropriate or violate the third-party intellectual property rights. Any of these events, even if we were ultimately to prevail, could require us to divert substantial financial and management resources that we would otherwise be able to devote to our business, which could have a material adverse effect on our financial condition and results of operations.

We may not be successful in obtaining necessary or exclusive rights to any drug candidates or products we may develop through acquisitions and in-licensing.

We may be unable to acquire or otherwise in-license any compositions, methods of use, processes, or other intellectual property rights from third parties that we identify as necessary for drug candidates that we may wish to develop. The licensing or acquisition of third-party intellectual property rights is a competitive area, and several more established companies may pursue strategies to license or acquire third-party intellectual property rights that we may consider attractive or necessary. These established companies may have a competitive advantage over us due to their size, capital resources and greater clinical development and commercialization

capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment or at all. If we are unable to successfully obtain rights to required third-party intellectual property rights or maintain the existing intellectual property rights we have, we may have to abandon development of the relevant program or drug candidates, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Patent rights we may in-license in the future may be subject to a reservation of rights by one or more third parties. For example, the research resulting in any in-licensed patent rights and technology may be funded in part by the U.S. government. As a result, the government may have certain rights, or march-in rights, to such patent rights and technology. When new technologies are developed with government funding, the government generally obtains certain rights in any resulting patents, including a non-exclusive license authorizing the government to use the invention for non-commercial purposes. These rights may permit the government to disclose our confidential information to third parties and to exercise march-in rights to use or allow third parties to use our licensed technology. The government can exercise its march-in rights if it determines that action is necessary because we fail to achieve practical application of the government-funded technology, because action is necessary to alleviate health or safety needs, to meet requirements of federal regulations, or to give preference to U.S. industry. In addition, our rights in such inventions may be subject to certain requirements to manufacture products embodying such inventions in the United States. Any exercise by the U.S. government of such rights could harm our competitive position, business, financial condition, results of operations and prospects.

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

As referenced above, in addition to seeking patent protection for certain aspects of our current or future technologies and drug candidates, we also consider trade secrets, including confidential and unpatented know-how, important to the maintenance of our competitive position. However, trade secrets and know-how can be difficult to protect. We protect and plan to protect trade secrets and confidential and unpatented know-how, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to such knowledge, such as our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants under which they are obligated to maintain confidentiality and to assign their inventions to us. Despite these efforts, we may not obtain these agreements in all circumstances and we cannot guarantee that we have entered into such agreements with each party that may have or have had access to our trade secrets or proprietary information.

Moreover, individuals with whom we have such agreements may not comply with their terms. Any of these parties may breach such agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for any such breaches. We may be forced to bring claims against third parties, including current or former employees or consultants, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property, including our patent rights. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret, or securing title to an employee- or consultant-developed invention if a dispute arises, is difficult, expensive and time-consuming, and the outcome is unpredictable. If we are unsuccessful in any inventorship disputes to which we are subject, we may lose valuable intellectual property rights, such as ownership of our patent rights. In addition, some courts in the United States and certain foreign jurisdictions disfavor or are unwilling to protect trade secrets. Further, if any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent that competitor from using the 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 materially and adversely harmed.

We may be subject to claims that we or our employees or consultants have wrongfully used or disclosed alleged trade secrets or other proprietary information of our employees' or consultants' former employers or their clients.

Many of our employees or consultants and our licensors' employees or consultants were previously employed at universities or biotechnology or biopharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees 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 one or more of these employees or consultants or we have inadvertently or otherwise used or disclosed intellectual property, including trade secrets or other proprietary information of any such individual's current or former employers. Litigation or arbitration may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel or may be enjoined from using such intellectual property. Any such proceedings and possible aftermath would likely divert significant resources from our core business, including distracting our technical and management personnel from their normal responsibilities. A loss of key research personnel or their work product could limit our ability to commercialize, or prevent us from commercializing, our current or future technologies or drug candidates, which could materially harm our business. Even if we are successful in defending against any such claims, litigation or arbitration could result in substantial costs and could be a distraction to management.

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

Periodic maintenance fees, renewal fees, annuity fees and various other government fees on patents or applications will be due to be paid to the USPTO and various government patent agencies outside of the United States over the lifetime of our patent rights and any patent rights we may own or in-license in the future. The USPTO and various non-U.S. government patent agencies require compliance with several procedural, documentary, fee payment and other similar provisions during the patent application process. We employ reputable law firms and other professionals to help us comply with these requirements, and we may also be dependent on our licensors to take the necessary action to comply with these requirements with respect to our in-licensed intellectual property. In many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. There are situations, however, in which non-compliance 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. In such an event, potential competitors might be able to enter the market with similar or identical products, which could have a material adverse effect on our business prospects and financial condition.

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 trademarks or trade names may be challenged, infringed, circumvented, declared generic or determined to be infringing on other marks. We own a pending U.S. trademark application, but do not yet own a U.S. registered trademark, for our corporate name, "RAPT." We may not be able to protect our rights to these trademarks and trade names or may be forced to stop using these names, which we use for name recognition by potential partners or customers in our markets of interest. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively and our business may be materially adversely affected.

Intellectual property rights do not necessarily address all potential threats to our business.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect our business. The following examples are illustrative:

- others may be able to make small molecule drugs, inhibitors or formulations that are similar to our drug candidates, but that are not covered by the claims of any patents that we own, license or control;
- we or any strategic partners might not have been the first to make the inventions covered by the patent rights that we own, license or control;
- we or our licensors might not have been the first to file patent applications covering certain of our owned and in-licensed inventions;
- others may independently develop the same, similar, or alternative technologies without infringing, misappropriating or violating our intellectual property rights;
- it is possible that our pending patent applications will not lead to issued patents;
- issued patents that we may own, in-license, or control may not provide us with any competitive advantages, or may be narrowed or held invalid or unenforceable, including as a result of legal challenges;
- our competitors might conduct research and development activities in the United States and other countries that provide a safe harbor from patent infringement claims for certain research and development activities, as well as in countries where we do not have patent rights, and may then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may choose not to file a patent in order to maintain certain trade secrets or know-how, and a third party may subsequently file a patent covering such trade secrets or know-how; and
- the patents of others may have an adverse effect on our business.

Should any of these events occur, they could have a material adverse impact on our business and financial condition.

Risks Related to Government Regulation

Clinical development includes a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results.

Our drug candidates FLX475 and RPT193 are in clinical development, and their risk of failure is high. It is impossible to predict when or if our candidates or any potential future drug candidates will prove effective in humans or will receive regulatory approval. Before obtaining marketing approval from regulatory authorities for the sale of any drug candidate, we must complete preclinical studies and then conduct extensive clinical trials to demonstrate the safety and efficacy of a drug candidate in humans. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the development process. The results of preclinical studies and clinical trials of any of our current or potential future drug candidates may not be predictive of the results of later-stage clinical trials. Drug candidates in later stages of

clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and initial clinical trials. A number of companies in the pharmaceutical industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy or safety profiles, notwithstanding promising results in earlier trials.

We are conducting a Phase 1/2 clinical trial investigating FLX475 as a single agent and in combination with pembrolizumab in a broad range of tumors and we anticipate that initial data from this trial will be available in the second quarter of 2020. Further, we completed the initial Phase 1a single and multiple dose escalation cohorts of healthy volunteers in our seamless Phase 1 trial of RPT193, and expect to initiate the Phase 1b portion of the trial in AD patients in February 2020, with PoC data expected in the third quarter of 2020. Despite these plans, we may experience delays in initiating or completing our clinical trials. We do not know whether planned clinical trials will be completed on schedule or at all, or whether planned clinical trials will begin on time, need to be redesigned, enroll patients on time or be completed on schedule, if at all. Our development programs may be delayed for a variety of reasons, including delays related to:

- the FDA or other regulatory authorities requiring us to submit additional data or imposing other requirements before permitting us to initiate a clinical trial;
- obtaining regulatory approval to commence a clinical trial;
- reaching agreement on acceptable terms with prospective CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and clinical trial sites;
- obtaining institutional review board (“IRB”) approval at each clinical trial site;
- recruiting suitable patients to participate in a clinical trial;
- having patients complete a clinical trial or return for post-treatment follow-up;
- clinical trial sites deviating from trial protocol or dropping out of a trial;
- adding new clinical trial sites; or
- manufacturing sufficient quantities of our drug candidates for use in clinical trials.

Furthermore, we expect to rely on our CROs and clinical trial sites to ensure the proper and timely conduct of our clinical trials and, while we expect to enter into agreements governing their committed activities, we have limited influence over their actual performance.

We could encounter delays if prescribing physicians encounter unresolved ethical issues associated with enrolling patients in clinical trials of our current or potential future drug candidates in lieu of prescribing existing treatments that have established safety and efficacy profiles. Further, a clinical trial may be suspended or terminated by us, our partners, the IRBs of the institutions in which such trials are being conducted, the Data Safety Monitoring Board for such trial or by the FDA or other regulatory authorities due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug or therapeutic biologic, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. If we experience delays in the completion, or termination, of any clinical trial of any of our current or potential future drug candidates, the commercial prospects of such drug candidate will be harmed, and our ability to generate product revenue from such drug candidates will be delayed.

In addition, any delays in completing our clinical trials will increase our costs, slow our product development and approval process and jeopardize our ability to commence product sales and generate revenue. Any of these occurrences may materially and adversely affect our business, financial condition, results of operations and prospects. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our current or potential future drug candidates.

We may be unable to obtain U.S. or foreign regulatory approval and, as a result, be unable to commercialize FLX475, RPT193 or other future drug candidate.

FLX475, RPT193 and other future drug candidates are and will be subject to extensive governmental regulations relating to, among other things, research, testing, development, manufacturing, safety, efficacy, approval, recordkeeping, reporting, labeling, storage, packaging, advertising and promotion, pricing, marketing and distribution of drugs and therapeutic biologics. Rigorous preclinical testing and clinical trials and an extensive regulatory approval process are required to be successfully completed in the U.S. and in many foreign jurisdictions before a new drug, therapeutic or biologic can be marketed. Satisfaction of these and other regulatory requirements is costly, time-consuming, uncertain and subject to unanticipated delays. It is possible that none of the drug candidates we may develop will obtain the regulatory approvals necessary for us or our potential future partners to begin selling them.

We have very limited experience in conducting and managing the clinical trials necessary to obtain regulatory approvals, including approval by the FDA. The time required to obtain FDA and other approvals is unpredictable but typically takes many years following the commencement of clinical trials, depending upon the type, complexity and novelty of the drug candidate. The standards that the FDA and its foreign counterparts use when regulating us require judgment and can change, which makes it difficult to predict with certainty how they will be applied. Any analysis we perform of data from preclinical and clinical activities is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. We may also encounter unexpected delays or increased costs due to new government regulations, for example, from future legislation or administrative action, or from changes in FDA policy during the period of product development, clinical trials and FDA regulatory review. It is impossible to predict whether legislative changes will be enacted, or whether FDA or foreign regulations, guidance or interpretations will be changed, or what the impact of such changes, if any, may be.

Any delay or failure in obtaining required approvals could have a material and adverse effect on our ability to generate revenue from the particular drug candidate for which we are seeking approval. Further, we and our potential future partners may never receive approval to market and commercialize any drug candidate. Even if we or a potential future partner obtains regulatory approval, the approval may be for targets, disease indications or patient populations that are not as broad as we intended or desired or may require labeling that includes significant use or distribution restrictions or safety warnings. We or a potential future partner may be subject to post-marketing testing requirements to maintain regulatory approval. If any of our drug candidates prove to be ineffective, unsafe or commercially unviable, we may have to re-engineer FLX475, RPT193 or other future drug candidates, and our entire pipeline could have little, if any, value, which could require us to change our focus and approach to small molecule discovery and development, which would have a material and adverse effect on our business, financial condition, results of operations and prospects.

We are also subject to numerous foreign regulatory requirements governing, among other things, the conduct of clinical trials, manufacturing and marketing authorization, pricing and third-party reimbursement. The foreign regulatory approval process varies among countries and may include all of the risks associated with FDA approval described above as well as risks attributable to the satisfaction of local regulations in foreign jurisdictions. Moreover, the time required to obtain approval may differ from that required to obtain FDA approval. Approval by the FDA does not ensure approval by regulatory authorities outside the United States and vice versa.

Even if we receive regulatory approval for any of our current or potential future drug candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense. Additionally, our current or potential future drug candidates, if approved, could be subject to labeling and other restrictions and market withdrawal and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our products.

Any regulatory approvals that we or potential future partners obtain for FLX475, RPT193 or other future drug candidates may also be subject to limitations on the approved indicated uses for which a product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including "Phase 4" clinical trials, and surveillance to monitor the safety and efficacy of such drug candidate. In addition, if the FDA or other regulatory authority approves FLX475, RPT193 or other future drug candidate, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, import, export, advertising, promotion and recordkeeping for such product will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMP and good clinical practices for any clinical trials that we conduct post-approval. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of the product, withdrawal of the product from the market or voluntary or mandatory product recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us or our strategic partners;
- suspension or revocation of product license approvals;
- product seizure or detention or refusal to permit the import or export of products; and
- injunctions or the imposition of civil or criminal penalties.

The FDA's policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our drug candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability, which would adversely affect our business.

Healthcare legislative reform measures may have a material adverse effect on our business and results of operations.

In the United States, there have been and continue to be a number of legislative initiatives to contain healthcare costs. For example, in March 2010, the Patient Protection and Affordable Care Act (the "ACA"), was enacted, which substantially changed the way healthcare is financed by both governmental and private insurers, and significantly impacted the U.S. pharmaceutical industry. Among the provisions of the ACA, of greatest importance to the pharmaceutical and biotechnology industry are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain specified branded prescription drugs and biologic agents apportioned among these entities according to their market share in some government healthcare programs;

- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program to 23.1% and 13% of the average manufacturer price for most branded and generic drugs, respectively, and capped the total rebate amount for innovator drugs at 100% of the Average Manufacturer Price ("AMP");

- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for certain drugs and biologics that are inhaled, infused, instilled, implanted or injected;

- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;

- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability;

- a Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;

- expansion of the entities eligible for discounts under the Public Health program;

- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;

- establishment of a Center for Medicare Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending; and

- implementation of the federal physician payment transparency requirements, sometimes referred to as the "Physician Payments Sunshine Act".

Some of the provisions of the ACA have yet to be fully implemented, and there have been legal and political challenges to certain aspects of the ACA. Since January 2017, President Trump has signed two executive orders and other directives designed to delay, circumvent, or loosen certain requirements mandated by the ACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, two bills affecting the implementation of certain taxes under the ACA have been signed into law. The Tax Cuts and Jobs Act of 2017 (the "Tax Act"), includes a provision that repealed, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year, that is commonly referred to as the "individual mandate." Additionally, President Trump signed a continuing resolution on appropriations for fiscal year 2018 that delayed the implementation of certain ACA-mandated fees, including the so-called "Cadillac" tax on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain health insurance providers based on market share, and the medical device excise tax on non-exempt medical devices. Further, the Bipartisan Budget Act of 2018 ("BBA"), among other things, amended the ACA, effective January 1, 2019, to close the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole." In July 2018, CMS published a final rule permitting further collections and payments to and from certain ACA qualified health plans and health insurance issuers under the ACA risk adjustment program in response to the outcome of federal district court litigation regarding the method CMS uses to determine this risk adjustment. In 2018, a U.S. District Court Judge in the Northern District of Texas ruled that the individual mandate is an inseverable feature of the ACA, and therefore, because it was

repealed as part of the Tax Act, the remaining provisions of the ACA are invalid as well. While the Texas U.S. District Court Judge, as well as the Trump Administration and CMS have stated that the ruling will have no immediate effect, it is unclear how this decision, subsequent appeals, and other efforts to repeal and replace the ACA will impact the ACA and our business.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted. 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. These reductions went into effect in 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2027 unless additional Congressional action is taken. In 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers. Additionally, there has been heightened governmental scrutiny recently over the manner in which manufacturers set prices for their marketed products. For example, there have been several recent Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to drug pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. At the federal level, the Trump administration's budget proposal for fiscal year 2019 contains further drug price control measures that could be enacted during the 2019 budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. Further, the Trump administration released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contains additional proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of drug products paid by consumers. In addition, on January 31, 2019, the HHS Office of Inspector General, proposed modifications to the federal Anti-Kickback Statute discount safe harbor for the purpose of reducing the cost of drug products to consumers that, among other things, if finalized, will affect discounts paid by manufacturers to Medicare Part D plans, Medicaid managed care organizations and pharmacy benefit managers working with these organizations. Although a number of these, and other potential, proposals will require additional authorization to become effective, Congress and the executive branch have each indicated that it will continue to seek new legislative or administrative measures to control drug costs. At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures and, in some cases, designed to encourage importation from other countries and bulk purchasing. These new laws and initiatives may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on our future customers and accordingly, our financial operations.

We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for our drug candidates or additional pricing pressures.

If we or potential future partners, manufacturers or service providers fail to comply with healthcare laws and regulations, we or they could be subject to enforcement actions, which could affect our ability to develop, market and sell our products and may harm our reputation.

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

financial arrangements and relationships through which we market, sell and distribute our drug candidates for which we obtain marketing approval. Restrictions under applicable federal and state healthcare laws and regulations, include the following:

- the federal Anti-Kickback Statute, which prohibits, among other things, a person or entity from knowingly and willfully soliciting, offering, paying, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, lease order, arranging for or recommendation of, any good, facility, item or service, for which payment may be made, in whole or in part, by a federal healthcare program, such as Medicare or Medicaid. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, a violation of the Anti-Kickback Statute can form the basis for a violation of the federal False Claims Act (discussed below);

- federal civil and criminal false claims laws and civil monetary penalties laws, including the federal False Claims Act, which provides for civil whistleblower or qui tam actions, that impose penalties against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government. In addition, the government may assert that a claim including items and services resulting from a referral made in violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act;

- HIPAA, which imposes criminal and civil liability for executing a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;

- HIPAA, as amended by HITECH, and its implementing regulations, including the Final Omnibus Rule published in January 2013, which impose obligations on certain covered entity healthcare providers, health plans, and healthcare clearinghouses as well as their business associates that perform certain services involving the use or disclosure of individually identifiable health information, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information, and require notification to affected individuals and regulatory authorities of certain breaches of security of individually identifiable health information;

- the federal false statements statute, which prohibits knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items or services;

- the federal transparency requirements known as the federal Physician Payments Sunshine Act, created as part of ACA, which requires certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children’s Health Insurance Program to report annually to CMS information related to payments and other transfers of value made by that entity to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members; and

- analogous local, state and foreign laws and regulations, such as state anti-kickback and false claims laws that may apply to healthcare items or services reimbursed by third-party payors, including

private insurers; local, state and foreign transparency laws that require manufacturers to report information related to payments and transfers of value to other healthcare providers and healthcare entities, marketing expenditures, or drug pricing; state laws that require pharmaceutical companies to register certain employees engaged in marketing activities in the location and comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government; and state and foreign laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Ensuring that our future business arrangements with third parties comply with applicable healthcare laws and regulations could involve substantial costs. If our operations are found to be in violation of any such requirements, we may be subject to penalties, including criminal and significant civil monetary penalties, damages, fines, individual imprisonment, disgorgement, contractual damages, reputational harm, exclusion from participation in government healthcare programs, integrity obligations, injunctions, recall or seizure of products, total or partial suspension of production, denial or withdrawal of pre-marketing product approvals, private qui tam actions brought by individual whistleblowers in the name of the government, refusal to allow us to enter into supply contracts, including government contracts, additional reporting requirements and oversight if subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. Although effective compliance programs can mitigate the risk of investigation and prosecution for violations of these laws, these risks cannot be entirely eliminated. Any action against us for an alleged or suspected violation could cause us to incur significant legal expenses and could divert our management's attention from the operation of our business, even if our defense is successful. In addition, achieving and sustaining compliance with applicable laws and regulations may be costly to us in terms of money, time and resources.

If we fail to comply with U.S. and foreign regulatory requirements, regulatory authorities could limit or withdraw any marketing or commercialization approvals we may receive and subject us to other penalties that could materially harm our business.

Even if we receive marketing and commercialization approval of a drug candidate, we will be subject to continuing regulatory requirements, including in relation to adverse patient experiences with the product and clinical results that are reported after a product is made commercially available, both in the United States and any foreign jurisdiction in which we seek regulatory approval. The FDA has significant post-market authority, including the authority to require labeling changes based on new safety information and to require post-market studies or clinical trials to evaluate safety risks related to the use of a product or to require withdrawal of the product from the market. The FDA also has the authority to require a Risk Evaluation and Mitigation Strategy ("REMS"), after approval, which may impose further requirements or restrictions on the distribution or use of an approved drug or therapeutic biologic. The manufacturer and manufacturing facilities we use to make a future product, if any, will also be subject to periodic review and inspection by the FDA and other regulatory agencies, including for continued compliance with cGMP requirements. The discovery of any new or previously unknown problems with our third-party manufacturers, manufacturing processes or facilities may result in restrictions on the product, manufacturer or facility, including withdrawal of the product from the market. We intend to rely on third-party manufacturers and we will not have control over compliance with applicable rules and regulations by such manufacturers. Any product promotion and advertising will also be subject to regulatory requirements and continuing regulatory review. If we or our existing or future partners, manufacturers or service providers fail to comply with applicable continuing regulatory requirements in the U.S. or foreign jurisdictions in which we seek to market our products, we or they may be subject to, among other things, fines, warning letters, holds on clinical trials, delay of approval or refusal by the FDA to approve pending applications or supplements to approved applications, suspension or withdrawal of regulatory approval, product recalls and seizures, administrative detention of products, refusal to permit the import or export of products, operating restrictions, injunction, civil penalties and criminal prosecution.

Even if we are able to commercialize any drug candidate, such drug candidate may become subject to unfavorable pricing regulations or third-party coverage and reimbursement policies, which would harm our business.

Our ability to commercialize any products successfully will depend, in part, on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from third-party payors, such as government authorities, private health insurers and health maintenance organizations. Patients who are prescribed medications for the treatment of their conditions generally rely on third-party payors to reimburse all or part of the costs associated with their prescription drugs. Coverage and adequate reimbursement from government healthcare programs, such as Medicare and Medicaid, and private health insurers are critical to new product acceptance. Patients are unlikely to use our future products, if any, unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost.

Cost-containment is a priority in the U.S. healthcare industry and elsewhere. As a result, government authorities and other 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 medical products. Third-party payors also may request additional clinical evidence beyond the data required to obtain marketing approval, requiring a company to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of its product. Commercial third-party payors often rely upon Medicare coverage policy and payment limitations in setting their reimbursement rates, but also have their own methods and approval process apart from Medicare determinations. Therefore, coverage and reimbursement for pharmaceutical products in the U.S. can differ significantly from payor to payor. We cannot be sure that coverage and adequate reimbursement will be available for any product that we commercialize and, if reimbursement is available, that the level of reimbursement will be adequate. Coverage and reimbursement may impact the demand for, or the price of, any drug candidate for which we obtain marketing approval. If coverage and reimbursement are not available or are available only at limited levels, we may not be able to successfully commercialize any drug candidate for which we obtain marketing approval.

Additionally, the regulations that govern regulatory approvals, pricing and reimbursement for new drugs and therapeutic biologics vary widely from country to country. Some countries require approval of the sale price of a drug or therapeutic biologic before it can be marketed. In many countries, the pricing review period begins after marketing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain regulatory 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 drug candidates, even if our drug candidates obtain regulatory approval.

We are subject to U.S. and foreign anti-corruption and anti-money laundering laws with respect to our operations and non-compliance with such laws can subject us to criminal or civil liability and harm our business.

We are subject to the U.S. Foreign Corrupt Practices Act of 1977, as amended (the “FCPA”), the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and possibly other state and national anti-bribery and anti-money laundering laws in countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, third-party intermediaries, joint venture partners and collaborators from authorizing, promising, offering or providing, directly or indirectly, improper payments or benefits to recipients in the public or private sector. We interact with officials and employees of government agencies and government-affiliated hospitals, universities and other organizations. In addition, we may engage third-party intermediaries to promote our clinical research activities abroad or to obtain necessary permits, licenses and other regulatory approvals. We can be held liable for the

corrupt or other illegal activities of these third-party intermediaries, our employees, representatives, contractors, partners and agents, even if we do not explicitly authorize or have actual knowledge of such activities.

Our Code of Business Conduct and Ethics mandates compliance with the FCPA and other anti-corruption laws applicable to our business throughout the world. However, we cannot assure you that our employees and third-party intermediaries will comply with this code or such anti-corruption laws. Noncompliance with anti-corruption and anti-money laundering laws could subject us to whistleblower complaints, investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, suspension or debarment from contracting with certain persons, the loss of export privileges, reputational harm, adverse media coverage and other collateral consequences. If any subpoenas, investigations or other enforcement actions are launched, or governmental or other sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation, our business, results of operations and financial condition could be materially harmed. In addition, responding to any action will likely result in a materially significant diversion of management's attention and resources and significant defense and compliance costs and other professional fees. In certain cases, enforcement authorities may even cause us to appoint an independent compliance monitor which can result in added costs and administrative burdens.

Comprehensive tax reform bills could adversely affect our business and financial condition.

In 2017, the U.S. Congress passed the Tax Act, enacting comprehensive tax legislation that includes significant changes to the taxation of business entities. These changes include, among others: a permanent reduction to the corporate income tax rate; a partial limitation on the deductibility of business interest expense; a shift of the U.S. taxation of multinational corporations from a tax on worldwide income to a territorial system (along with certain rules designed to prevent erosion of the U.S. income tax base); and a one-time tax on accumulated offshore earnings held in cash and illiquid assets, with the latter taxed at a lower rate. Notwithstanding the reduction in the corporate income tax rate, the overall impact of this tax reform remains uncertain, and our business and financial condition could be adversely affected. This prospectus does not provide an in-depth discussion of any such tax legislation or the manner in which it might affect purchasers of our common stock. We urge our stockholders to consult with their legal and tax advisors with respect to any such legislation and the potential tax consequences of investing in our common stock.

Risks Related to Our Common Stock and this Offering

Our quarterly operating results may fluctuate significantly or may fall below the expectations of investors or securities analysts, each of which may cause our stock price to fluctuate or decline.

We expect our operating results to be subject to quarterly fluctuations. Our net loss and other operating results will be affected by numerous factors, including:

- variations in the level of expense related to the ongoing development of our drug candidates or future development programs;
- results of clinical trials, or the addition or termination of clinical trials or funding support by us or potential future partners;
- our execution of any collaboration, licensing or similar arrangements, and the timing of payments we may make or receive under potential future arrangements or the termination or modification of any such potential future arrangements;
- any intellectual property infringement, misappropriation or violation lawsuit or opposition, interference or cancellation proceeding in which we may become involved;

- additions and departures of key personnel;
- strategic decisions by us or our competitors, such as acquisitions, divestitures, spin-offs, joint ventures, strategic investments or changes in business strategy;
- if any of our drug candidates receives regulatory approval, the terms of such approval and market acceptance and demand for such drug candidates;
- regulatory developments affecting our drug candidates or those of our competitors; and
- changes in general market and economic conditions.

If our quarterly operating results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any quarterly fluctuations in our operating results may, in turn, cause the price of our stock to fluctuate substantially. We believe that quarterly comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of our future performance.

Our stock price may be volatile and purchasers of our common stock could incur substantial losses.

Our stock price has been and is likely to continue to be volatile. For example, the closing price of our common stock since October 31, 2019 through February 6, 2020, has ranged from a low of $12.30 to a high of $48.86. As a result of this volatility, investors may not be able to sell their common stock at or above the public offering price. The market price for our common stock may be influenced by many factors, including the other risks described in this section of the prospectus titled “Risk Factors” and the following:

- our ability to advance FLX475, RPT193 or other potential future drug candidates in the clinic;
- results of our preclinical studies, non-clinical studies and clinical trials for our current and future drug candidates or those of our competitors or potential future partners;
- regulatory or legal developments in the United States and other countries, especially changes in laws or regulations applicable to our products;
- the success of competitive products or technologies;
- introductions and announcements of new products by us, our future commercialization partners, or our competitors, and the timing of these introductions or announcements;
- actions taken by regulatory agencies with respect to our products, clinical trials, manufacturing process or sales and marketing terms;
- actual or anticipated variations in our financial results or those of companies that are perceived to be similar to us;
- the success of our efforts to acquire or in-license additional technologies, products or drug candidates;
- developments concerning any future collaborations, including, but not limited to, those with our sources of manufacturing supply and our commercialization partners;
- market conditions in the pharmaceutical and biotechnology sectors;

- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- developments, disputes or litigation matters concerning patents or other intellectual property rights, and our ability to obtain and maintain patent protection for our products;
- our ability or inability to raise additional capital and the terms on which we raise it;
- the recruitment or departure of key personnel;
- changes in the structure of healthcare payment systems;
- actual or anticipated changes in earnings estimates or changes in stock market analyst recommendations regarding our common stock, other comparable companies or our industry generally;
- our failure or the failure of our competitors to meet analysts' projections or guidance that we or our competitors may give to the market;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- announcement and expectation of additional financing efforts;
- speculation in the press or investment community;
- trading volume of our common stock;
- sales of our common stock by us or our stockholders including after the expiration of the lockup agreements entered into in connection with our initial public offering;
- the concentrated ownership of our common stock;
- changes in accounting principles;
- terrorist acts, acts of war or periods of widespread civil unrest;
- natural disasters and other calamities; and
- general economic, industry and market conditions.

In addition, the stock markets in general, and the markets for pharmaceutical, biopharmaceutical and biotechnology stocks in particular, have experienced extreme volatility that has been often unrelated to the operating performance of the issuer. These broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance. Substantial purchases of common stock by existing stockholders could reduce the liquidity of the trading market for our common stock and increase price volatility.

You will experience immediate and substantial dilution as a result of this offering and may experience additional dilution in the future.

If you purchase common stock in this offering at the public offering price of $30.00 per share, you will incur immediate and substantial dilution of $23.66 per share, representing the difference between the public

offering price and our pro forma net tangible book value per share as of September 30, 2019 after giving effect to this offering. Moreover, we issued options in the past to acquire common stock and securities convertible into common stock at prices significantly below the public offering price. As of September 30, 2019, there were 943,610 shares of our common stock subject to outstanding options at a weighted average exercise price of $6.82 per share. To the extent that any of these outstanding securities are ultimately exercised or settled, you will incur further dilution.

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

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. 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. Debt 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.

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 drug 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, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market drug candidates that we would otherwise prefer to develop and market ourselves.

Because our management will have flexibility in allocating the net proceeds from this offering, you may not agree with how we use them and the proceeds may not be invested successfully.

We intend to use the net proceeds from this offering to fund preclinical and clinical development activities for FLX475, RPT193 or other future drug candidates, further development of our drug discovery and development engine and additional drug candidates, hiring of additional personnel, capital expenditures, costs of operating as a public company and for other general purposes. We may also use a portion of the net proceeds from this offering to in-license, acquire or invest in complementary businesses, technologies, products or assets. However, we have no current commitments or obligations to do so. Therefore, our management will have flexibility in allocating the net proceeds from this offering. Accordingly, you will be relying on the judgment of our management with regard to the allocation of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being allocated appropriately. It is possible that the proceeds will be invested in a way that does not yield a favorable, or any, return for our company.

If securities or industry analysts do not publish research or reports about our company, or if they issue an adverse or misleading opinion regarding our stock, our stock price and trading volume could decline.

The trading market for our common stock is influenced by the research and reports that industry or securities analysts publish about us or our business. We currently have limited coverage by securities analysts. If few securities or industry analysts cover our company, the trading price for our common stock would be negatively impacted. If any of the analysts who cover us issue an adverse or misleading opinion regarding us, our business model, our intellectual property rights or our common stock performance, or if our target studies and operating results fail to meet the expectations of the analysts, our stock price would likely decline. If one or more of these analysts cease coverage of our company 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.

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

Based on the beneficial ownership of our capital stock as of December 31, 2019, our executive officers and directors, together with holders of 5% or more of our capital stock before this offering and their respective affiliates, will beneficially own a majority of our common stock immediately after the closing of this offering without giving effect to any additional purchases by these holders in the offering and assuming no exercise of the underwriters option to purchase additional shares. As a result, these stockholders, if acting together, will continue to have significant influence over the outcome of corporate actions requiring stockholder approval, including the election of directors, any merger, consolidation or sale of all or substantially all of our assets and any other significant corporate transaction.

The interests of these stockholders may not be the same as, and may even conflict with, your interests. For example, these stockholders could delay or prevent a change of control of our company, even if such a change of control would benefit our other stockholders, which could deprive our stockholders of an opportunity to receive a premium for their common stock as part of a sale of our company or our assets and might affect the prevailing market price of our common stock. The significant concentration of stock ownership may adversely affect the trading price of our common stock due to investors' perception that conflicts of interest may exist or arise.

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.

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. After this offering, we will have 24,329,584 outstanding shares of common stock based on the number of shares outstanding as of September 30, 2019, after giving effect to the 3,427,360 shares sold in our initial public offering and the 2,500,000 shares that we are selling in this offering. Of these shares, 4,852,760 may be resold in the public market immediately without restriction, which includes 2,352,760 shares sold in our initial public offering that were not purchased by our directors, officers or beneficial holders of 10% or more of our outstanding common stock, and the 2,500,000 shares that we are selling in this offering, assuming that they are not purchased by our affiliates. The remaining 19,476,824 shares are currently restricted as a result of securities laws or lock-up agreements, but will become eligible to be sold after the offering as described in the "Shares Eligible for Future Sale" section of this prospectus.

In connection with this offering, we, along with our executive officers, directors, and certain of our stockholders affiliated with our directors have entered into lock-up agreements with the underwriters, subject to certain exceptions, not to dispose of or hedge any of their common stock or securities convertible into or exchangeable for shares of our common stock until the date that is 90 days from the date of this prospectus. BMO Capital Markets Corp., Wells Fargo Securities, LLC, UBS Securities LLC and Cantor Fitzgerald & Co., may, in their sole discretion, release all or a portion of the shares subject to these lock-up agreements at any time prior to the expiration of the lock-up agreements.

In addition, in connection with our initial public offering, we, along with our executive officers, directors, and holders of substantially all of our capital stock, stock options and other securities convertible into, exercisable or exchangeable for our capital stock outstanding immediately prior to the closing of our initial public offering entered into market stand-off agreements with us or entered into lock-up agreements with the underwriters, subject to certain exceptions, not to dispose of or hedge any of their common stock or securities convertible into or exchangeable for shares of common stock during the period from October 30, 2019 to April 27, 2020, except with the prior written consent of BMO Capital Markets Corp., Wells Fargo Securities, LLC and UBS Securities LLC. BMO Capital Markets Corp., Wells Fargo Securities, LLC and UBS Securities LLC may, in their sole discretion, release all or a portion of the shares subject to these lock-up agreements at any time prior to April 27, 2020. See "Shares Eligible for Future Sale" for more information.

The holders of 17,467,184 shares of our common stock are entitled to rights with respect to the registration of their shares under the Securities Act, subject to the lock-up agreements described above, as applicable. See "Description of Capital Stock—Registration Rights." Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act. Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock.

Future sales and issuances of our common stock or rights to purchase common stock, including pursuant to our 2019 Equity Incentive Plan, could result in additional dilution of the percentage ownership of our stockholders and could cause our stock price to fall.

We expect that significant additional capital may be needed in the future to continue our planned operations, including further development of our drug discovery and development engine, preparing IND filings, conducting clinical trials, commercialization efforts, expanded research and development activities and costs associated with operating a public company. To raise capital, we may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible securities or other equity securities, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing stockholders, and new investors could gain rights, preferences and privileges senior to the holders of our common stock, including shares of common stock sold in this offering.

Pursuant to our 2019 Equity Incentive Plan ("2019 Plan"), our management is authorized to grant stock options to our employees, directors and consultants. Initially, the aggregate number of shares of our common stock that may be issued pursuant to stock awards under our 2019 Plan is 3,481,819 shares. Additionally, the number of shares of our common stock reserved for issuance under our 2019 Plan will automatically increase on January 1 of each year, beginning on January 1, 2020 and continuing through and including January 1, 2030, by 4% of the total number of shares of our capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our board of directors. Unless our board of directors elects not to increase the number of shares available for future grant each year, our stockholders may experience additional dilution, which could cause our stock price to fall.

We are an "emerging growth company" and our election of reduced reporting requirements applicable to emerging growth companies may make our common stock less attractive to investors.

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act, or JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, or Section 404, reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy 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. In addition, as an emerging growth company, we are only required to provide two years of audited financial statements and two years of selected financial data in this prospectus. We could be an emerging growth company for up to five years following the completion of our initial public offering, although circumstances could cause us to lose that status earlier, including if we are deemed to be a "large accelerated filer," which occurs when the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30, or if we have total annual gross revenue of $1.07 billion or more during any fiscal year before that time, in which cases we would no longer be an emerging growth company as of the following December 31, or if we issue more than $1.0 billion in non-convertible debt during any three-year period before that time, in which case we would no longer be an emerging growth company immediately. Even after we no longer qualify as an emerging growth company, we could still qualify as a "smaller reporting company," which would allow us to take advantage of many of the same exemptions from disclosure

requirements including not being required to comply with the auditor attestation requirements of Section 404 and reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our share price may be more volatile.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to avail ourselves of an exemption that allows us to delay adopting new or revised accounting standards until such time as those standards apply to private companies. As a result, we will not be subject to the same new or revised accounting standards as other public companies that comply with the public company effective dates, including but not limited to the new lease accounting standard. We have also 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 of these elections, the information that we provide to our stockholders may be different than you might receive from other public reporting companies. However, if we later decide to opt out of the extended period for adopting new accounting standards, we would need to disclose such decision and it would be irrevocable.

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, 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. However, 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.

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

In general, under Section 382 of the Internal Revenue Code of 1986, as amended (the "Code") a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its pre-change net operating loss ("NOL") or tax credits to offset future taxable income. Our existing NOLs or credits may be subject to substantial limitations arising from previous ownership changes, and if we undergo an ownership change our ability to utilize NOLs or credits could be further limited by Section 382 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 Section 382 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. Furthermore, our ability to utilize our NOLs or credits is conditioned upon our attaining profitability and generating U.S. federal and state taxable income. As described above under "—Risks Related to Business," we have incurred significant net losses since our inception and anticipate that we will continue to incur significant losses for the foreseeable future; thus, we do not know whether or when we will generate the U.S. federal or state taxable income necessary to utilize our NOLs or credits.

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 growth and development of our business. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

We may incur significant costs from class action litigation due to the volatility of our stock.

Our stock price may fluctuate for many reasons, including as a result of public announcements regarding the progress of our development efforts for our drug discovery and development engine and our drug candidates, the development efforts of future partners or competitors, the addition or departure of our key personnel, variations in our quarterly operating results and changes in market valuations of biopharmaceutical and biotechnology companies. This risk is especially relevant to us because biopharmaceutical and biotechnology companies have experienced significant stock price volatility in recent years. When the market price of a stock has been volatile, holders of that stock have occasionally brought securities class action litigation against the company that issued the stock. If any of our stockholders were to bring a lawsuit of this type against us, even if the lawsuit is without merit, we could incur substantial costs defending the lawsuit. The lawsuit could also divert the time and attention of our management.

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

Provisions in our amended and restated certificate of incorporation and our amended and restated bylaws may delay or prevent an acquisition of our company or a change in our management. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Because our board of directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team. These provisions include:

- a prohibition on actions by our stockholders by written consent;
- a requirement that special meetings of stockholders, which our company is not obligated to call more than once per calendar year, be called only by the chair of our board of directors, our chief executive officer, or our board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors;
- advance notice requirements for election to our board of directors and for proposing matters that can be acted upon at stockholder meetings;
- division of our board of directors into three classes, serving staggered terms of three years each; and
- the authority of the board of directors to issue preferred stock with such terms as the board of directors may determine.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, as amended, 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. These provisions would apply even if the proposed merger or acquisition could be considered beneficial by some stockholders.

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

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law:

(1) any derivative action or proceeding brought on our behalf;

(2) any action asserting a breach of fiduciary duty owed by any of our directors, officers, employees or agents to us or our stockholders;

(3) any action asserting a claim against us or any of our directors, officers or other employees arising under any provisions of the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws; or

(4) any action asserting a claim against us or any of our directors, officers or other employees governed by the internal affairs doctrine.

These provisions would not apply to suits brought to enforce a duty or liability created by the Exchange Act or the rules and regulations thereunder. However, these provisions apply to Securities Act claims and Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce a duty or liability created by the Securities Act or the rules and regulations thereunder. Accordingly, there is uncertainty as to whether a court would enforce such provisions, and our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

Our amended and restated certificate of incorporation further provides that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, subject to and contingent upon a final adjudication in the State of Delaware of the enforceability of such exclusive forum provision.

These exclusive-forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and other employees. If a court were to find the exclusive-forum provisions in our amended and restated certificate of incorporation to be inapplicable or unenforceable, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could seriously harm our business. For example, the Court of Chancery of the State of Delaware recently determined that a provision stating that U.S. federal district courts are the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act is not enforceable. However, this decision may be reviewed and ultimately overturned by the Delaware Supreme Court. If the Court of Chancery's decision were to be overturned, we would seek to enforce the federal district court exclusive forum provision in our amended and restated certificate of incorporation.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements about us and our industry that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations or financial condition, business strategy and plans and objectives of management for future operations and statements that are necessarily dependent upon future events are forward-looking statements. In some cases, you can identify forward-looking statements because they contain words such as "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "target," "upcoming," "will" or "would" or the negative of these words or other similar terms or expressions. Forward-looking statements in this prospectus include, but are not limited to, statements about:

- estimates of our total addressable market, future revenue, expenses, capital requirements and our needs for additional financing;
- the initiation, cost, timing, progress and results of research and development activities, preclinical or and clinical trials with respect to FLX475, RPT193 and potential future drug candidates;
- our ability to identify, develop and commercialize drug candidates;
- our ability to advance FLX475, RPT193 or other future drug candidates into, and successfully complete, preclinical studies and clinical or field trials;
- our ability to obtain and maintain regulatory approval of FLX475, RPT193 or other future drug candidates, and any related restrictions, limitations and/or warnings in the label of an approved drug candidate;
- our ability to develop and expand our drug discovery and development engine;
- our ability to identify drug candidates using our drug discovery and development engine;
- our ability to obtain funding for our operations;
- our ability to obtain and maintain intellectual property protection for our technology and any of our drug candidates;
- our ability to successfully commercialize any of our drug candidates;
- the rate and degree of market acceptance of any of our drug candidates;
- regulatory developments in the United States and international jurisdictions;
- potential liability lawsuits and penalties related to our technology, our drug candidates and our current and future relationships with third parties;
- our ability to attract and retain key scientific and management personnel;
- our ability to effectively manage the growth of our operations;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately under those arrangements;
- our ability to compete effectively with existing competitors and new market entrants;

- our expectations regarding uses of proceeds from this offering;
- potential effects of extensive government regulation;
- our financial performance;
- our expectation regarding the time during which we will be an emerging growth company under the JOBS Act; and
- the volatility of the trading price of our common stock.

You should not rely on forward-looking statements as predictions of future events. We have based the forward-looking statements contained in this prospectus primarily on our current expectations and projections about future events and trends that we believe may affect our business, financial condition, results of operation, business strategy and financial needs. The outcome of the events described in these forward-looking statements is subject to risks, uncertainties and other factors described in the section titled “Risk Factors” and elsewhere in this prospectus. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible for us to predict all risks and uncertainties that could have an impact on us. The results, events and circumstances reflected in the forward-looking statements may not be achieved or occur, and actual results, events or circumstances could differ materially from those described in the forward-looking statements.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based on information available to us as of the date of this prospectus. While we believe that information provides a reasonable basis for these statements, that information may be limited or incomplete. Our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all relevant information. These statements are inherently uncertain, and investors are cautioned not to unduly rely on these statements.

The forward-looking statements made in this prospectus relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statements made in this prospectus to reflect events or circumstances after the date of this prospectus or to reflect new information or the occurrence of unanticipated events, except as required by law. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments. We qualify all of our forward-looking statements by these cautionary statements.

MARKET, INDUSTRY AND OTHER DATA

This prospectus contains estimates and information concerning our industry, including market size and growth rates of the markets in which we participate, which are based on industry publications and reports. This information involves a number of assumptions and limitations, and you are cautioned not to give undue weight to this information.

We have not independently verified the accuracy or completeness of the data contained in industry publications and reports. While we believe that each of these studies and publications is reliable, the industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the section titled “Risk Factors.” These and other factors could cause results to differ materially from those expressed in these publications and reports.

USE OF PROCEEDS

We estimate that we will receive net proceeds from this offering of approximately $69.7 million (or approximately $80.3 million if the underwriters exercise in full their option to purchase additional shares of our common stock) based on the public offering price of $30.00 per share of common stock, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The principal purposes of this offering are to increase our capitalization and financial flexibility. We currently expect to use the net proceeds from this offering, together with our existing cash and cash equivalents, as follows:

- Approximately $20.0 million to $25.0 million to further the clinical development of FLX475;
- Approximately $20.0 million to $25.0 million to further the clinical development of RPT193; and
- The remaining proceeds for continued development of other future drug candidates, continued refinement of our proprietary drug discovery and development engine and other general corporate purposes.

We also may use a portion of the net proceeds from this offering to in-license, acquire or invest in complementary businesses, technologies, products or assets. We, however, have no current commitments or obligations to do so. Based on our planned use of the net proceeds, we estimate that such funds, together with our existing cash and cash equivalents, will be sufficient for us to fund our operating expenses and capital expenditure requirements for at least the next twelve months.

We cannot specify with certainty all of the particular uses for the remaining net proceeds to us from this offering. The expected net proceeds from this offering, together with our existing cash and cash equivalents will not be sufficient for us to fund any of our drug candidates through regulatory approval, and we will need to raise additional capital to advance the development of our drug candidates. We will have broad discretion over how to use the net proceeds to us from this offering. Pending their use, we intend to invest the net proceeds to us from this offering in board-approved investments including U.S. treasuries, U.S. government agencies, A-1/P-1 commercial paper, bank repurchase agreements, CDs from investment grade banks and money market funds.

DIVIDEND POLICY

We have never declared or paid any dividends on our capital stock. We currently intend to retain all available funds and future earnings, if any, to fund the development and expansion of our business, and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination regarding the declaration and payment of dividends will be at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant. In addition, we may enter into agreements in the future that could contain restrictions on payments of cash dividends.

CAPITALIZATION

The following table sets forth our cash and cash equivalents, and our capitalization as of September 30, 2019 as follows:

- on an actual basis;
- on a pro forma basis, giving effect to (i) the automatic conversion of all outstanding shares of our convertible preferred stock as of September 30, 2019 into 17,467,184 shares of common stock immediately prior to the closing of our initial public offering, (ii) the filing and effectiveness of our amended and restated certificate of incorporation, which occurred upon the closing of our initial public offering on November 4, 2019 and (iii) the sale of 3,427,360 shares of our common stock and receipt of net proceeds of approximately $33.8 million from the closing of our initial public offering; and
- on a pro forma as adjusted basis, giving effect to (i) the pro forma adjustments set forth above and (ii) the issuance and sale of shares of common stock in this offering based upon the receipt by us of the estimated net proceeds from this offering and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma and pro forma as adjusted information below is illustrative only, and our capitalization following the closing of this offering will be adjusted based on the actual public offering price and other terms of this offering determined at pricing. You should read the pro forma and pro forma as adjusted information below in conjunction with our consolidated financial statements and the related notes included in this prospectus and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Selected Consolidated Financial Data" and other financial information contained in this prospectus.

	As of September 30, 2019		
	Actual	Pro Forma	Pro Forma as Adjusted
		(in thousands, except share and per share data)	
Cash and cash equivalents	$ 48,310	$ 82,073	$ 151,773
Convertible preferred stock, $0.0001 par value per share: 117,889,475 shares authorized, actual, no shares pro forma and pro forma as adjusted; 104,803,325 shares issued and outstanding, actual; no shares issued and outstanding, pro forma and pro forma as adjusted	$ 175,490	$ —	$ —
Stockholders' (deficit) equity:			
Preferred stock, $0.0001 par value per share: no shares authorized, issued or outstanding, actual; 50,000,000 shares authorized and no shares issued and outstanding, pro forma and pro forma as adjusted	—	—	—
Common stock, $0.0001 par value per share: 133,071,007 shares authorized, 935,040 shares issued and outstanding, actual; 500,000,000 shares authorized, 21,829,584 shares issued and outstanding, pro forma; 24,329,584 shares issued and outstanding, pro forma as adjusted	1	2	2
Additional paid-in capital	23,923	233,175	302,875
Accumulated other comprehensive income	13	13	13
Accumulated deficit	(148,734)	(148,734)	(148,734)
Total stockholders' (deficit) equity	(124,797)	84,456	154,156
Total capitalization	$ 50,693	$ 84,456	$ 154,156

The outstanding share information in the table above is based on 18,402,224 shares of our common stock (including shares of our convertible preferred stock on an as-converted basis) outstanding as of September 30, 2019 and 3,427,360 shares of our common stock issued in connection with our initial public offering in November 2019, and excludes:

- 943,610 shares of our common stock issuable upon the exercise of options to purchase shares of our common stock issued under our 2019 Equity Incentive Plan and 2015 Stock Plan and outstanding as of September 30, 2019, with a weighted-average exercise price of $6.82 per share;
- 555,439 shares of our common stock issuable upon the exercise of stock options granted after September 30, 2019, with a weighted-average exercise price of $23.87 per share;
- 56,500 shares subject to restricted stock unit awards granted after September 30, 2019;
- 1,669,759 shares of our common stock reserved and available for future issuance under our 2019 Equity Incentive Plan; and
- 240,336 shares of our common stock reserved for future issuance under our 2019 Employee Stock Purchase Plan (“ESPP”), which includes an annual evergreen increase.

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 public offering price per share and the pro forma as adjusted net tangible book value per share of our common stock immediately after the completion of this offering.

As of September 30, 2019, we had a pro forma net tangible book value of approximately $84.5 million, or $3.87 per share. Pro forma net tangible book value per share represents the amount of our total tangible assets less our total liabilities, divided by the number of shares of our common stock outstanding as of September 30, 2019, after giving effect to (i) the automatic conversion of all shares of our convertible preferred stock outstanding as of September 30, 2019 into 17,467,184 shares of our common stock and (ii) the issuance and sale of 3,427,360 shares of our common stock in connection with the closing of our initial public offering for net proceeds of $33.8 million.

After giving further effect to the sale of 2,500,000 shares of common stock that we are offering at the public offering price of $30.00 per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of September 30, 2019 would have been approximately $154.2 million, or approximately $6.34 per share. This amount represents an immediate increase in pro forma as adjusted net tangible book value of $2.47 per share to our existing stockholders and an immediate dilution in pro forma as adjusted net tangible book value per share of approximately $23.66 per share to new investors purchasing shares of common stock in this offering.

Dilution per share to new investors purchasing our common stock is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from the public offering price per share paid by new investors. The following table illustrates this dilution (without giving effect to any exercise by the underwriters of their option to purchase additional shares of our common stock) on a per share basis:

Public offering price per share		$30.00
Pro forma net tangible book value per share as of September 30, 2019	$3.87	
Increase in pro forma net tangible book value per share attributable to this offering	2.47	
Pro forma as adjusted net tangible book value per share after this offering		6.34
Dilution in pro forma as adjusted net tangible book value per share to new investors in this offering		$23.66

If the underwriters exercise in full their option to purchase additional shares of our common stock, the pro forma as adjusted net tangible book value after the offering would be $6.67 per share, the increase in pro forma net tangible book value per share to existing stockholders would be $2.80 per share and the dilution per share to new investors would be $23.33 per share.

The following table summarizes the differences between the number of shares of common stock purchased from us by our existing stockholders and common stock by new investors purchasing shares in this offering, the total consideration paid to us in cash and the average price per share paid by existing stockholders for shares of common stock issued prior to this offering and the price to be paid by new investors for shares of common stock in this offering. The calculation below is based on the public offering price of $30.00 per share, before deducting estimated underwriting discounts and commissions and estimated offering expenses.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
	(in thousands, except share, per share and percentages)				
Existing stockholders	21,829,584	90%	$217,798	74%	$ 9.98
New investors	2,500,000	10%	75,000	26%	$ 30.00
Total	24,329,584	100%	$292,798	100%	

The outstanding share information in the table above is based on 18,402,224 shares of our common stock (including shares of our convertible preferred stock on an as-converted basis) outstanding as of September 30, 2019 and 3,427,360 shares of our common stock issued in connection with our initial public offering in November 2019, and excludes:

- 943,610 shares of our common stock issuable upon the exercise of options to purchase shares of our common stock issued under our 2019 Equity Incentive Plan (“2019 Plan”) and 2015 Stock Plan (“2015 Plan”) and outstanding as of September 30, 2019, with a weighted-average exercise price of $6.82 per share;
- 555,439 shares of our common stock issuable upon the exercise of stock options granted after September 30, 2019, with a weighted-average exercise price of $23.87 per share;
- 56,500 shares subject to restricted stock unit awards granted after September 30, 2019;
- 1,669,759 shares of our common stock reserved and available for future issuance under our 2019 Plan; and
- 240,336 shares of our common stock reserved for future issuance under our ESPP, which includes an annual evergreen increase.

If the underwriters exercise in full their option to purchase additional shares of our common stock, our existing stockholders would own 88% and the investors purchasing shares of our common stock in this offering would own 12% of the total number of shares of our common stock outstanding immediately after closing of this offering.

SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and related notes included elsewhere in this prospectus.

The consolidated statements of operations data for the years ended December 31, 2017 and 2018, and the balance sheet data as of December 31, 2017 and 2018, are derived from our audited consolidated financial statements and related notes included elsewhere in this prospectus. The condensed consolidated statements of operations data for the nine months ended September 30, 2018 and 2019 and the condensed consolidated balance sheet data as of September 30, 2019 are derived from our unaudited interim condensed consolidated financial statements and related notes included elsewhere in this prospectus. We have prepared the unaudited interim condensed consolidated financial statements on a basis consistent with our audited consolidated financial statements and, in the opinion of management, such unaudited interim condensed consolidated financial statements reflect all adjustments, consisting only of normal recurring adjustments, that are necessary for the fair presentation of our unaudited interim condensed consolidated financial statements. Our historical results are not necessarily indicative of the results to be expected in the future, and the results for the nine months ended September 30, 2019 are not necessarily indicative of the results to be expected for the full year or any other period. The selected financial data in this section are not intended to replace our consolidated financial statements and the related notes and are qualified in their entirety by the consolidated financial statements and related notes included elsewhere in this prospectus.

	Year ended December 31,		Nine months ended September 30,	
	2017	2018	2018	2019
	(in thousands, except share and per share data)			
Consolidated Statements of Operations Data:				
Operating costs and expenses:				
Research and development	$ 25,618	$ 31,767	$ 23,387	$ 24,720
General and administrative	3,713	5,180	3,889	6,094
Total operating expenses	29,331	36,947	27,276	30,814
Loss from operations	29,331	36,947	27,276	30,814
Other income, net	216	800	559	1,033
Net loss	$ (29,115)	$ (36,147)	$ (26,717)	$ (29,781)
Net loss per share, basic and diluted[1]	$ (67.45)	$ (58.09)	$ (45.11)	$ (40.15)
Weighted average number of shares used in computing net loss per share, basic and diluted	431,679	622,289	592,237	741,711
Pro forma net loss per share, basic and diluted[1]		$ (2.50)		$ (1.69)
Weighted average number of shares used in computing pro forma net loss per share, basic and diluted		14,461,086		17,641,844

(1) See Note 13 to our audited consolidated financial statements and Note 11 to our unaudited interim condensed consolidated financial statements for an explanation of the method used to calculate historical and pro forma basic and diluted net loss per share.

	December 31,		September 30,
	2017	2018	2019
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 47,517	$ 63,798	$ 48,310
Working capital	44,994	60,419	45,767
Total assets	50,391	69,610	58,369
Convertible preferred stock	108,643	161,111	175,490
Accumulated deficit	(82,806)	(118,953)	(148,734)
Total stockholders' deficit	(62,405)	(97,113)	(124,797)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read together with the section titled "Selected Condensed and Consolidated Financial Data" and our condensed and consolidated financial statements and accompanying notes included elsewhere within this prospectus. This discussion includes both historical information and forward-looking statements that involve risk, uncertainties and assumptions. Our actual results may differ materially from management's expectations as a result of various factors, including, but not limited to, those discussed in the section titled "Risk Factors."

Overview

We are a clinical-stage immunology-based biopharmaceutical company focused on discovering, developing and commercializing oral small molecule therapies for patients with significant unmet needs in oncology and inflammatory diseases. Utilizing our proprietary drug discovery and development engine, we are developing highly selective small molecules that are designed to modulate the critical immune responses underlying these diseases. In our first four years since inception, we have discovered and advanced two unique drug candidates each targeting CCR4. Our lead oncology drug candidate, FLX475, reached the clinic in just two and a half years and our lead inflammation drug candidate, RPT193, entered the clinic in August 2019. We are also pursuing a range of targets, including GCN2 and HPK1, that are in the discovery stage of development.

Our lead oncology drug candidate, FLX475, is designed to selectively inhibit the migration of immunosuppressive T_{reg} into tumors. In a Phase 1 clinical trial in 104 healthy volunteers, FLX475 was well tolerated and demonstrated favorable drug-like properties with a level of target engagement that, in our preclinical studies, corresponded with 90% inhibition of in vitro T_{reg} migration and the highest level of inhibition of in vivo T_{reg} migration and antitumor activity. FLX475 has also demonstrated single agent and combination activity in preclinical tumor models associated with the inhibition of T_{reg} migration into the tumor and an increase in the CD8 : T_{reg} ratio. We are currently conducting a Phase 1/2 clinical trial investigating FLX475 as a single agent and in combination with pembrolizumab in order to study the safety and potential clinical activity of FLX475 in patients with advanced cancer. The Phase 2 portion of the trial will evaluate FLX475 as a monotherapy and in combination with pembrolizumab specifically in patients with several types of "charged" tumors, which represent cancer types we believe are most likely to respond to FLX475, and we anticipate results from the Phase 2 portion of the trial could provide clinical proof-of-concept ("PoC"). We intend to provide an initial data readout from the Phase 1/2 trial in the second quarter of 2020.

Our lead inflammation drug candidate, RPT193, is designed to selectively inhibit the migration of Th2 cells into allergically-inflamed tissues. Th2 cells are clinically validated drivers of allergic diseases along the "atopic march" such as AD, asthma, chronic urticaria (skin rash), allergic conjunctivitis, chronic rhinosinusitis and eosinophilic esophagitis (inflammation of the esophagus). We believe based on our preclinical pharmacology and GLP toxicology results, if confirmed in clinical trials, combined with the convenience of once-daily oral dosing, RPT193, if approved by the FDA, could fill an unmet medical need for the treatment of allergic disorders. We initiated a first-in-human trial in August 2019 that we refer to as "seamless" given that it starts with healthy volunteers and then transitions directly into a cohort of patients with AD. We have completed the initial Phase 1a single and multiple dose escalation cohorts of healthy volunteers and the blinded safety, pharmacokinetic, and pharmacodynamic data from this Phase 1a portion of the trial have demonstrated the ability to achieve target drug levels and receptor occupancy with an acceptable safety profile using once-daily dosing of RPT193 in healthy volunteers. We expect to initiate the Phase 1b portion of the trial in AD patients in February 2020 and we anticipate reporting PoC results from this trial in the third quarter of 2020. Thereafter, we intend to expand clinical development into additional Th2-driven allergic indications.

In addition, we are identifying lead compounds that inhibit GCN2, which we believe is a fundamental regulator of antitumor immunity and tumor cell survival. Preclinical studies have demonstrated that an

RPT-GCN2i has the ability to increase in vitro T cell proliferation and function in nutrient-deprived conditions, enhance tumor cell death and elicit antitumor responses in preclinical tumor models. We are developing an RPT-GCN2i with the intent of selecting a preclinical candidate in 2020.

We will continue to invest in our proprietary discovery and development engine and investigate several of our identified targets as well as generate additional target and drug candidates, including a future HPK1 drug candidate.

Financial Overview

Since commencing operations in 2015, we have devoted substantially all of our efforts and financial resources to building our research and development capabilities and establishing our corporate infrastructure. As a result, we have incurred net losses since inception. As of September 30, 2019, we had an accumulated deficit of $148.7 million. We have incurred net losses of $29.1 million, $36.1 million, $26.7 million and $29.8 million for the years ended December 31, 2017 and 2018, and for the nine months ended September 30, 2018 and 2019, respectively. We do not expect to generate product revenue unless and until we obtain approval for the commercialization of a drug candidate, and we cannot assure you that we will ever generate significant revenue or profits.

Since inception, we financed our operations primarily through the private placements of convertible preferred stock with net proceeds of $175.5 million. As of December 31, 2019, our cash and cash equivalents was $77.4 million, which includes net proceeds of approximately $33.8 million from the closing of our initial public offering in November 2019. The December 31, 2019 information is preliminary and subject to adjustment and has not been reviewed or audited by our independent registered public accounting firm. We believe that our existing cash and cash equivalents will be sufficient to fund our planned operations for at least the next 12 months from the date of this prospectus without the proceeds from this offering.

We expect to incur substantial expenditures in the foreseeable future as we expand our pipeline and advance our drug candidates through clinical development, undergo the regulatory approval process and, if approved, launch commercial activities. Specifically, in the near term we expect to incur substantial expenses relating to our ongoing and planned clinical trials, the development and validation of our manufacturing processes, and other development activities. We expect to continue to incur additional costs associated with operating as a public company, including significant legal, accounting, investor relations and other expenses that we did not incur as a private company.

We will need substantial additional funding to support our continuing operations and pursue our development strategy. Until such time as we can generate significant revenue from sales of our drug candidates, if ever, we expect to finance our operations through the sale of equity, debt financings or other capital sources, including potential collaborations with other companies or other strategic transactions. Adequate funding may not be available to us on acceptable terms, or at all. If we fail to raise capital or enter into such agreements as, and when, needed, we may have to significantly delay, scale back, or discontinue the development and commercialization of our drug candidates or delay our efforts to expand our product pipeline. We may also be required to sell or license to other parties rights to develop or commercialize our drug candidates that we would prefer to retain.

Collaboration and License Agreement

In December 2019, we entered into a Collaboration and License Agreement with Hanmi, a corporation organized under the laws of the Republic of Korea, pursuant to which we granted Hanmi an exclusive license to develop, manufacture and commercialize FLX475 and related compounds and products with respect to human cancers in the Republic of Korea, the Republic of China (Taiwan), and the People’s Republic of China, including the special administrative regions of Macau and Hong Kong (the “Hanmi Territory”) and certain sublicense

rights. In consideration of such rights, under the agreement we will receive $10.0 million in an upfront payment and expected near-term milestone payment, and is eligible to receive (i) additional contingent payments of up to $108.0 million upon the achievement of specified milestones, consisting of up to $48.0 million based on the dosing of the first patient in a Phase 3 clinical trial in the Hanmi Territory and the filing and approval of a new drug application in the Hanmi Territory and up to $60.0 million based on annual net sales, and (ii) low double-digit royalties on future net sales of FLX475 in the Hanmi Territory. Royalties will be payable on a product-by-product and country-by-country basis for a period commencing with the first commercial sale until the latest of (a) the expiration of the relevant patent right, (b) the expiration of regulatory or data exclusivity granted by the applicable governmental authority, and (c) five years from such first commercial sale (such period being the "Royalty Term" for such product and country); provided that the royalties will be reduced by 50% if the product in question is not covered by a valid claim during the Royalty Term in the applicable country and by a percentage dependent on any generic products' market share in the Hanmi Territory. We will supply FLX475 for use in Hanmi's Phase 2 clinical trials and Hamni will reimburse us for our manufacturing costs. If requested, we will facilitate technology transfer to Hanmi for their manufacture of FLX475 product for Phase 3 trials and commercialization. The term of the agreement will continue until Hanmi's royalty payment obligations have expired, unless sooner terminated by either party pursuant to the terms of the agreement, including in connection with a material breach by, or insolvency of, the other party. For more information regarding our Collaboration and License Agreement with Hanmi, please see "Business—Collaboration and License Agreement."

Clinical Trial Collaboration and Supply Agreement

In November 2018, we entered into a clinical trial collaboration and supply agreement with MSD International GmbH, an affiliate of Merck (known as MSD outside the United States and Canada), under which we will conduct a clinical trial evaluating FLX475 as a monotherapy and in combination with KEYTRUDA® (pembrolizumab), Merck's anti-PD-1 therapy, in patients with advanced cancers. We are the sponsor of the clinical trial and are responsible for the costs of conducting it, and Merck will supply KEYTRUDA® for use in the clinical trial at no charge to us except that we may be required to reimburse Merck's manufacturing costs upon certain early termination events. Neither party will have any other obligations to reimburse any costs or expenses incurred by the other party. We retain ownership of the quantities of FLX475 used in the clinical trial and we will own the quantities of KEYTRUDA® supplied to us by Merck for use in the clinical trial. The agreement provides for joint ownership of any inventions, clinical data and results generated in the clinical trial that relate to the combined use of the two drugs. Merck will solely own any inventions generated in the clinical trial that relate solely to KEYTRUDA® and all data resulting from testing performed by or on behalf of Merck upon samples collected during the clinical trial. We will solely own any inventions generated in the clinical trial that relate solely to FLX475, clinical data resulting from the use of FLX475 as a monotherapy, and from all data resulting from testing performed by or on behalf of us upon samples collected during the clinical trial. The term of the agreement will continue until delivery of the final report for the clinical trial, provided that either party may terminate the agreement due to the other party's uncured material breach, a violation of anti-corruption obligations, patient safety concerns, regulatory action that prevents supply of such party's compound, or such party's termination of its compound's development or withdrawal of its compound's regulatory approval. Merck may also terminate the agreement if we fail to make any changes to the clinical trial protocol regarding the use of KEYTRUDA® that are reasonably requested by Merck to address any concern raised by Merck that KEYTRUDA® is being used in the clinical trial in an unsafe manner.

Components of Operating Results

Research and Development Expenses

We expense both internal and external research and development expenses to operations as they are incurred. We track the external research and development costs incurred for each of our drug candidates. We do not track our internal research and development costs by drug candidate, as the related efforts and their costs are typically spread across multiple drug candidates.

We account for non-refundable advance payments for goods or services that will be used in future research and development activities as expenses when the goods have been received or when the service has been performed rather than when the payment is made.

Clinical trial costs are a component of research and development expenses. We expense costs for our clinical trial activities performed by third parties, including clinical research organizations ("CROs") and other service providers, as they are incurred, based upon estimates of the work completed over the life of the individual study in accordance with the associated agreements. We use information received from internal personnel and outside service providers to estimate the clinical trial costs incurred.

External research and development expenses consist primarily of costs incurred for the development of our drug candidates and include:

- expenses incurred under agreements with CROs, investigative sites, and consultants to conduct our clinical trials and preclinical and non-clinical studies;
- costs to acquire, develop and manufacture supplies for clinical trials and other studies, including fees paid to contract manufacturing organizations, or CMOs; and
- costs related to compliance with drug development regulatory requirements.

Internal research and development costs include:

- salaries and related costs, including stock-based compensation and travel expenses, for personnel in our research and development functions;
- costs for consultants who advise us on multiple drug candidates; and
- depreciation and other allocated facility-related and overhead expenses.

We expect our research and development expenses to increase substantially during the next few years as we seek to complete existing and initiate additional clinical trials, pursue regulatory approval of FLX475 and RPT193, and advance other programs into the clinic. Over the next few years, we expect our preclinical, clinical, and contract manufacturing expenses to increase significantly relative to what we have incurred to date. Predicting the timing or the final cost to complete our clinical program or validation of our manufacturing and supply processes is difficult and delays may occur because of many factors.

General and Administrative Expenses

General and administrative expenses consist principally of personnel-related costs including payroll and stock-based compensation for personnel in executive, finance, human resources, business and corporate development, and other administrative functions; professional fees for legal, consulting, and accounting services; rent and other facilities costs, depreciation, and other general operating expenses not otherwise classified as research and development expenses.

We anticipate that our general and administrative expenses will increase substantially during the next few years as a result of staff expansion and additional occupancy costs, as well as costs associated with being a public company, including higher professional fees for legal, consulting, and accounting services, investor relations costs, higher insurance premiums and other compliance costs.

Other Income, Net

Other income, net, consists primarily of interest earned on our cash and cash equivalents and also includes interest we earn on promissory notes we executed with our president and chief executive officer and

former chief operating officer. The promissory note with our former chief operating officer was extinguished in May 2019, and the promissory note with our president and chief executive officer was forgiven in June 2019. As of September 30, 2019, our cash and cash equivalents are invested in money market funds.

Critical Accounting Policies, Significant Judgments and Use of Estimates

Our consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, as well as the reported expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

While our significant accounting policies are described in the notes to our consolidated financial statements, we believe that the following critical accounting policies are most important to understanding and evaluating our reported financial results.

Research and Development Expenses

Research and development costs are charged to expense as incurred. Research and development costs consist primarily of salaries and benefits of research and development personnel, costs related to research activities, preclinical studies, clinical trials, drug manufacturing and allocated overhead and facility-related costs. We account for non-refundable advance payments for goods or services that will be used in future research and development activities as expenses when the related goods have been received or when the service has been performed rather than when the payment is made.

Clinical trial costs are a component of research and development expenses. We expense costs for our clinical trial activities performed by third parties, including CROs and other service providers, as they are incurred, based upon estimates of the work completed over the life of the individual study in accordance with associated agreements. We use information we receive from internal personnel and outside service providers to estimate the progress of services performed and the associated clinical trial costs incurred.

Stock-Based Compensation Expense

We account for stock-based compensation arrangements with employees in accordance with ASC 718, *Stock Compensation*. Stock-based awards issued by the Company have been primarily stock options with time-based vesting and performance-based options. ASC 718 requires the recognition of compensation expense, using a fair value-based method, for costs related to all stock-based awards. Our determination of the grant-date fair value of stock options with time-based vesting utilizes the Black-Scholes option-pricing model, and is impacted by the fair value of our common stock as well as other variables including, but not limited to, expected term that options will remain outstanding, expected common stock price volatility over the term of the option awards, risk-free interest rates and expected dividends. There was no public market for our common stock until our initial public offering closed on November 4, 2019. As such, the estimated fair value of our common stock and underlying stock options has been determined at each grant date by our board of directors, with input from management, based on the information known to us on the grant date and upon a review of any recent events and their potential impact on the estimated per share fair value of our common stock. Our valuations of our common stock were prepared by a third-party valuation firm in accordance with the guidance outlined in the American Institute of Certified Public Accountants Technical Practice Aid, *Valuation of Privately Held Company Equity Securities Issued as Compensation* (the "Practice Aid").

For awards with time-based vesting, stock-based compensation is recognized over the period during which an optionee is required to provide services in exchange for the option award, known as the requisite service period (usually the vesting period) on a straight-line basis. For awards with performance-based vesting, the fair value of the award is recognized as expense when the performance criteria are probable of being achieved, using an accelerated attribution method. In both cases, stock-based compensation expense is recognized based on the fair value determined on the date of grant.

Equity instruments issued to non-employees are accounted for in accordance with ASC 505-50, *Equity Based Payments to Non-Employees*, and are recorded at their fair value on the measurement date and are subject to periodic adjustments as the underlying equity instruments vest. The fair value of options granted to consultants is expensed when vested.

Estimating the fair value of equity-settled awards as of the grant date using the Black-Scholes option pricing model, is affected by assumptions regarding a number of complex variables. Changes in the assumptions can materially affect the fair value and ultimately how much stock-based compensation expense is recognized. These inputs are subjective and generally require significant analysis and judgment to develop. These inputs are:

Expected term – The expected term represents the period that our 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). We have very limited historical information to develop reasonable expectations about future exercise patterns and post-vesting employment termination behavior for our stock option grants.

Expected volatility – The expected volatility was estimated based on the average volatility for comparable publicly traded biopharmaceutical companies over a period, where available, equal to the expected term of the stock option grants. The comparable companies were chosen based on their similar size, life cycle stage, or area of specialty.

Risk-Free Interest Rate – The risk-free interest rate is based on the U.S. Treasury zero coupon issues in effect at the time of grant for periods corresponding with the expected term of the options.

Expected Dividend – We have never paid dividends on our common stock and has no plans to pay dividends on our common stock. Therefore, we used an expected dividend yield of zero.

We will continue to use judgment in evaluating the expected volatility, expected terms, and interest rates utilized for our stock-based compensation expense calculations on a prospective basis.

Stock-based compensation expense for employees and non-employees is reflected in the consolidated and condensed consolidated statements of operations and comprehensive loss as follows (in thousands):

	Year Ended December 31,		For the Nine Months Ended September 30,	
	2017	2018	2018	2019
			(unaudited)	
Research and development	$394	$ 542	$404	$ 611
General and administrative	322	628	470	544
Total stock-based compensation expense	$716	$1,170	$874	$1,155

Common Stock Valuations

Prior to our initial public offering, the grant date fair value of our common stock was determined by our Board of Directors with the assistance of management and an independent third-party valuation specialist. The

grant date fair value of our common stock was determined using valuation methodologies which utilized certain assumptions including probability weighting of events, volatility, time to liquidation, a risk-free interest rate and an assumption for a discount for lack of marketability (Level 3 inputs). In determining the fair value of our common stock, the methodologies used to estimate the enterprise value of the Company were performed using methodologies, approaches, and assumptions consistent with the Practice Aid. The methodology to determine the fair value of our common stock included estimating the fair value of the enterprise using a market approach, which estimates the fair value of the Company by including an estimation of the value of the business based on guideline public companies under a number of different scenarios. The assumptions used to determine the estimated fair value of our common stock are based on numerous objective and subjective factors, combined with management judgment, including external market conditions affecting the pharmaceutical and biotechnology industry and trends within the industry; our stage of development; the rights, preferences and privileges of our convertible preferred stock relative to those of our common stock; the prices at which we sold shares of our convertible preferred stock; our financial condition and operating results, including our levels of available capital resources; the progress of our research and development efforts, our stage of development and business strategy; equity market conditions affecting comparable public companies; general U.S. market conditions and the lack of marketability of our common stock.

The Practice Aid identifies various available methods for allocating enterprise value across classes and series of capital stock to determine the estimated fair value of common stock at each valuation date. In accordance with the Practice Aid, we considered the following methods:

- *Option Pricing Method*. Under the option pricing method ("OPM"), shares are valued by creating a series of call options with exercise prices based on the liquidation preferences and conversion terms of each equity class. The estimated fair values of the preferred and common stock are inferred by analyzing these options.

- *Probability-Weighted Expected Return Method*. The probability-weighted expected return method ("PWERM") is a scenario-based analysis that estimates value per share based on the probability-weighted present value of expected future investment returns, considering each of the possible outcomes available to us, as well as the economic and control rights of each share class.

Based on our early stage of development and other relevant factors, we determined that an OPM was the most appropriate method for allocating our enterprise value to determine the estimated fair value of our common stock for valuations during 2017 and 2018. Prior to our initial public offering, we used the PWERM method to determine the estimated fair value of our common stock. The PWERM is appropriate for a company expecting a near term liquidity event. In determining the estimated fair value of our common stock, we considered the fact that our stockholders could not freely trade our common stock in the public markets. Accordingly, we applied discounts to reflect the lack of marketability of our common stock based on the weighted-average expected time to liquidity.

Following the completion of our initial public offering, our Board of Directors determines the fair value of our common stock based on the closing price of our common stock on the date of grant.

Income Taxes

We provide for income taxes under the asset and liability method. Current income tax expense or benefit represents the amount of income taxes expected to be payable or refundable for the current year. Deferred income tax assets and liabilities are determined based on differences between the financial statement reporting and tax bases of assets and liabilities and net operating loss and credit carryforwards, and are measured using the enacted tax rates and laws that will be in effect when such items are expected to reverse. Deferred income tax assets are reduced, as necessary, by a valuation allowance when management determines it is more likely than not that some or all of the tax benefits will not be realized.

We account for uncertain tax positions in accordance with ASC 740-10, *Accounting for Uncertainty in Income Taxes*. We assess all material positions taken in any income tax return, including all significant uncertain positions, in all tax years that are still subject to assessment or challenge by relevant taxing authorities. Assessing an uncertain tax position begins with the initial determination of the position's sustainability and is measured at the largest amount of benefit that is greater than fifty percent likely of being realized upon ultimate settlement. As of each balance sheet date, unresolved uncertain tax positions must be reassessed, and we will determine whether (i) the factors underlying the sustainability assertion have changed and (ii) the amount of the recognized tax benefit is still appropriate. The recognition and measurement of tax benefits requires significant judgment. Judgments concerning the recognition and measurement of a tax benefit might change as new information becomes available.

As of December 31, 2018, our total deferred tax assets were $24.8 million. Due to our lack of earnings history and uncertainties surrounding our ability to generate future taxable income, the net deferred tax assets have been fully offset by a valuation allowance. The deferred tax assets were primarily comprised of federal and state tax net operating losses ("NOLs"). Utilization of NOLs may be limited by the "ownership change" rules, as defined in Section 382 of the Internal Revenue Code. Similar rules may apply under state tax laws. Our ability to use our remaining NOLs may be further limited if we experience an ownership change in connection with this offering, future offerings or as a result of future changes in our stock ownership.

Results of Operations

Comparison of the Years Ended December 31, 2017 and 2018

The following table summarizes our results of operations for the periods indicated (in thousands):

	Year Ended December 31,			
	2017	2018	$ Change	% Change
Operating expenses:				
Research and development	$ 25,618	$ 31,767	$ 6,149	24%
General and administrative	3,713	5,180	1,467	40
Total operating expenses	29,331	36,947	7,616	26
Loss from operations	29,331	36,947	7,616	26
Other income:				
Other income, net	216	800	584	270
Net loss	$(29,115)	$(36,147)	$(7,032)	24%

Research and Development Expenses

Research and development expenses increased $6.1 million, or 24%, from $25.6 million for the year ended December 31, 2017 to $31.8 million for the year ended December 31, 2018. The increase in research and development expenses was primarily due to an increase of $2.4 million in clinical trial expenses to support our lead clinical candidates, an increase of $1.5 million in outsourced research and development consultants, an increase in laboratory supplies of $1.4 million to support our preclinical programs and an increase in personnel and other costs of $0.8 million as a result of an increase in employee headcount.

The following is a comparison of research and development expenses for the years ended December 31, 2017 and 2018 (in thousands):

	Year Ended December 31,	
	2017	2018
External development expenses:		
FLX475	$ 2,910	$ 2,941
RPT193	—	1,324
Other Programs	2,596	1,204
Internal research and development expenses	20,112	26,298
Total research and development expenses	$25,618	$31,767

As previously noted, we do not track our own internal research and development costs by drug candidate, as the related efforts and their costs are typically spread across multiple drug candidates.

General and Administrative Expenses

General and administrative expenses increased $1.5 million, or 40%, from $3.7 million for the year ended December 31, 2017 to $5.2 million for the year ended December 31, 2018. The increase in general and administrative expenses was primarily due to an increase of $0.7 million in personnel costs as a result of an increase in employee headcount, an increase of $0.4 million in legal and accounting fees, an increase of $0.2 million in investor relations expense and an increase of $0.1 million in other administrative expenses to support our infrastructure growth.

Other Income, Net

Other income, net increased $0.6 million, from $0.2 million for the year ended December 31, 2017 to $0.8 million for the year ended December 31, 2018. The increase was due to an increase in interest income of $0.6 million primarily as a result of a higher average cash and cash equivalents balances in 2018.

Comparison of the Nine Months Ended September 30, 2019 and 2018

The following table summarizes our results of operations for the periods indicated (in thousands):

	Nine Months Ended September 30,			
	2018	2019	$ Change	% Change
Operating expenses:				
Research and development	$ 23,387	$ 24,720	$ 1,333	6%
General and administrative	3,889	6,094	2,205	57%
Total operating expenses	27,276	30,814	3,538	13%
Loss from operations	27,276	30,814	3,538	13%
Other income:				
Other income, net	559	1,033	$ 474	85%
Net loss	$(26,717)	$(29,781)	$(3,064)	11%

Research and Development Expenses

Research and development expenses increased $1.3 million, or 6%, to $24.7 million for the nine months ended September 30, 2019 from $23.4 million for the nine months ended September 30, 2018. The increase in

research and development expenses was primarily due to an increase of $2.7 million in clinical costs relating to RPT193, an increase of $0.9 million in personnel costs, $0.2 million in consulting, and $0.9 million in facilities related expenses, offset by a decrease of $0.4 million in clinical costs relating to FLX475, a decrease of $1.4 million in lab supplies and a decrease of $1.6 million in outsourced research and development costs.

The following is a comparison of research and development expenses for the nine months ended September 30, 2019 and 2018 (in thousands):

	Nine Months Ended September 30,	
	2018	2019
External development expenses:		
FLX475	$ 4,331	$ 4,068
RPT193	1,119	3,752
Other Programs	586	312
Internal research and development expenses	17,351	16,588
Total research and development expenses	$23,387	$24,720

As previously noted, we do not track our own internal research and development costs by drug candidate, as the related efforts and their costs are typically spread across multiple drug candidates.

General and Administrative Expenses

General and administrative expenses increased $2.2 million, or 57%, to $6.1 million for the nine months ended September 30, 2019 from $3.9 million for the nine months ended September 30, 2018. The increase was primarily due to an increase of $0.3 million in personnel costs, an increase of $0.7 million in consultant costs, an increase of $0.5 million in legal fees, an increase of $0.6 million in accounting and audit related costs and an increase of $0.1 million in travel-related costs.

Other Income, Net

Other income, net increased $0.5 million to $1.0 million for the nine months ended September 30, 2019 from $0.5 million for the nine months ended September 30, 2018. The increase was as a result of a higher average cash and cash equivalents balances in 2019.

Liquidity and Capital Resources; Plan of Operations

As of December 31, 2019, we had cash and cash equivalents of $77.4 million, which includes net proceeds of approximately $33.8 million from the closing of our initial public offering in November 2019. The December 31, 2019 information is preliminary and subject to adjustment. Our cash and cash equivalents are held in money market funds. Since inception, we have incurred net losses and negative cash flows from operations. At September 30, 2019, we had an accumulated deficit of $148.7 million, and working capital of $45.8 million. In addition, we expect to incur substantial costs in order to conduct research and development activities necessary to develop a commercialized product. Additional capital will be needed to undertake these activities and commercialization efforts, and, therefore, we intend to raise such capital through the issuance of additional equity, borrowings, and potentially strategic alliances with other companies. Based on our planned use of the net proceeds from this offering, we estimate that such funds, together with our existing cash and cash equivalents, will be sufficient for us to fund our operating expenses and capital expenditure requirements for at least the next twelve months. However, if such financing is not available at adequate levels or on acceptable terms, we could be required to significantly reduce operating expenses and delay, reduce the scope of or eliminate some of our development programs or our commercialization efforts, out-license intellectual property rights to our drug candidates and sell unsecured assets, or a combination of the above, any of which may have a material adverse

effect on our business, results of operations, financial condition and/or our ability to fund its scheduled obligations on a timely basis or at all. Our ability to continue as a going concern is dependent upon our ability to successfully accomplish these plans and secure sources of financing and ultimately attain profitable operations.

Our failure to raise capital as and when needed could have a negative impact on our financial condition and our ability to pursue our business strategies. We anticipate that we will need to raise substantial additional capital, the requirements of which will depend on many factors, including:

- the scope, rate of progress and costs of our drug discovery, preclinical development activities, laboratory testing and clinical trials for our drug candidates;
- the number and scope of clinical programs we decide to pursue;
- the scope and costs of manufacturing development and commercial manufacturing activities;
- the extent to which we acquire or in-license other drug candidates and technologies;
- the cost, timing and outcome of regulatory review of our drug candidates;
- the cost and timing of establishing sales and marketing capabilities, if any of our drug candidates receive marketing approval;
- the costs of preparing, filing and prosecuting patent applications, obtaining, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims;
- our ability to establish and maintain collaborations on favorable terms, if at all;
- our efforts to enhance operational systems and our ability to attract, hire and retain qualified personnel, including personnel to support the development of our drug candidates;
- the costs associated with being a public company; and
- the cost associated with commercializing our drug candidates, if they receive marketing approval.

If we raise additional funds by issuing equity securities, our stockholders may experience dilution. Any future debt financing into which we enter may impose upon us additional covenants that restrict our operations, including limitations on our ability to incur liens or additional debt, pay dividends, repurchase our common stock, make certain investments and engage in certain merger, consolidation or asset sale transactions. Any debt financing or additional equity that we raise may contain terms that are not favorable to us or our stockholders. If we are unable to raise additional funds when needed, we may be required to delay, reduce, or terminate some or all of our development programs and clinical trials. We may also be required to sell or license to other parties rights to develop or commercialize our drug candidates that we would prefer to retain.

See “Risk Factors” for additional risks associated with our substantial capital requirements.

Summary Consolidated Statement of Cash Flows

The following table sets forth the primary sources and uses of cash and cash equivalents for each of the periods presented below (in thousands):

	Year Ended December 31,		Nine Months Ended September 30,	
	2017	2018	2018	2019
Net cash (used in) provided by:				
Operating activities	$(27,123)	$ (32,953)	$(23,742)	$(29,786)
Investing activities	(1,124)	(3,500)	(1,846)	(863)
Financing activities	30,102	52,734	30,112	15,161
Net increase (decrease) in cash and cash equivalents	$ 1,855	$ 16,281	$ 4,524	$(15,488)

Cash Used in Operating Activities

Net cash used in operating activities was $27.1 million for the year ended December 31, 2017, reflecting a net loss of $29.1 million, net changes in operating assets and liabilities of $0.1 million, partially offset by non-cash charges for depreciation, amortization and stock-based compensation expense of $2.1 million. Net cash used in operating activities was $33.0 million for the year ended December 31, 2018, reflecting a net loss of $36.1 million, partially offset by non-cash charges for depreciation, amortization and stock-based compensation expense of $2.4 million, and net decreases in operating assets and liabilities of $0.7 million.

Net cash used in operating activities was $23.7 million for the nine months ended September 30, 2018, reflecting a net loss of $26.7 million, partially offset by non-cash charges for depreciation, amortization and stock-based compensation expense of $1.9 million and net decrease in operating assets and liabilities of $1.1 million. Net cash used in operating activities was $29.8 million for the nine months ended September 30, 2019, reflecting a net loss of $29.8 million, net decrease in operating assets and liabilities of $2.2 million, partially offset by non-cash charges for depreciation, amortization and stock-based compensation expense of $2.2 million.

Cash Used in Investing Activities

Cash used in investing activities was $1.1 million and $3.5 million for years ended December 31, 2017 and 2018, respectively, and primarily resulted from the purchase of laboratory equipment and leasehold improvements.

Cash used in investing activities was $1.8 million and $0.9 million for the nine months ended September 30, 2018 and 2019, respectively, and primarily resulted from the purchase of laboratory equipment and leasehold improvements.

Cash Provided by Financing Activities

Net cash provided by financing activities was $30.1 million and $52.7 million for the years ended December 31, 2017 and 2018, respectively, resulting from the receipt of net proceeds from the issuance of our convertible preferred stock.

Net cash provided by financing activities was $30.1 million and $15.2 million for the nine months ended September 30, 2018 and 2019, respectively, resulting from the receipt of net proceeds from the issuance of our convertible preferred stock.

Contractual Obligations and Commitments

The following table summarizes our contractual obligations as of September 30, 2019 (in thousands):

	Payment due by Period				
	Less than 1 year	2 to 3	4 to 5	After 5	Total
Operating Lease obligations	$ 1,445	$3,745	$4,255	$4,946	$14,391

As of September 30, 2019, our commitments consisted of operating leases for our operating facilities for approximately 36,754 square feet. Under the terms of the agreements, we will have lease obligations, net of sublease income, consisting of $14.4 million in payments from 2019 through 2026.

We enter into contracts in the normal course of business with third-party contract organizations for clinical trials, non-clinical studies and testing, and other services and products for operating purposes. These contracts generally provide for termination following a certain period after notice, and therefore we believe that our non-cancelable obligations under these agreements are not material and they are not included in the table above.

Off-Balance Sheet Arrangements

Since our inception, we have not engaged in any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

Indemnification

As permitted under Delaware law and in accordance with our bylaws, we indemnify our officers and directors for certain events or occurrences while the officer or director is or was serving in such capacity. We are also party to indemnification agreements with our officers and directors. We believe the fair value of the indemnification rights and agreements is minimal. Accordingly, we have not recorded any liabilities for these indemnification rights and agreements as of December 31, 2017 and December 31, 2018.

JOBS Act Accounting Election

The Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"), permits an "emerging growth company" such as us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies. We are choosing to elect the extended transition period for complying with new or revised accounting standards pursuant to Section 107(b) of the JOBS Act until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

We elected to use this extended transition period for complying with new or revised accounting standards, including but not limited to the new lease accounting standard, that have different effective dates for public and private companies until the earlier of the date that we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, these financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates. We early adopted Accounting Standards Update 2014-09, *Revenue from Contracts with Customers* (Accounting Standards Codification Topic 606), and Accounting Standards Update 2018-07, *Improvements to Nonemployee Share-Based Payment Accounting* (Accounting Standards Codification Topic 718), as the JOBS Act does not preclude an emerging growth company from early adopting a new or revised accounting standard earlier than the time that such standard applies to private companies. We expect to use the extended transition period for any other new or revised accounting standards during the period in which we remain an emerging growth company.

We will remain an emerging growth company until the earliest of (1) the last day of our first 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 (ii) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700.0 million of the prior June 30th and (2) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

Recent Accounting Pronouncements Not Yet Adopted

Under the JOBS Act, we meet the definition of an emerging growth company, and have elected the extended transition period for complying with new or revised accounting standards pursuant to Section 107(b) of the JOBS Act.

In February 2016, the FASB issued ASU No. 2016-02, Leases. ASU 2016-02 requires lessees to put most leases on their balance sheet while recognizing expense in a manner similar to existing accounting. ASU 2016-02 states that a lessee would recognize a lease liability for the obligation to make lease payments and a right-to-use asset for the right to use the underlying asset for the lease term. The new accounting guidance is effective for the Company for fiscal periods beginning after December 15, 2019 and early adoption is permitted. The Company is currently assessing the impact that the adoption will have on its consolidated financial statements and related disclosures.

In June 2016, the FASB issued ASU No. 2016-13 Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. ASU 2016-13 amended guidance on reporting credit losses for assets held at amortized cost basis and available-for-sale debt securities. For available-for-sale debt securities, credit losses will be presented as an allowance rather than as a write-down. This standard is effective for the Company's fiscal year beginning after December 31, 2020. Early adoption is permitted for all entities. The Company is currently assessing the impact that the adoption of ASU 2016-13 will have on its condensed consolidated financial statements and related disclosures.

In August 2016, the FASB issued ASU No. 2016-15, Statement of Cash Flows (Topic 230), which provides greater clarity to preparers on the treatment of certain items within an entity's statement of cash flows. ASU 2016-15 is intended to reduce diversity in practice in how certain transactions are classified in the statement of cash flows. The guidance is effective for the Company on January 1, 2019, and the Company is currently evaluating the impact that the adoption of ASU 2016-15 will have on its consolidated financial statements and related disclosures.

In June 2018, the FASB issued ASU No. 2018-07, Compensation—Stock Compensation (Topic 718): Improvements to Non-Employee Share-Based Payment Accounting as part of the FASB simplification initiative. ASU 2018-07 expands the scope of Topic 718, allowing the Company to apply the requirements of Topic 718 to certain non-employee awards to acquire goods and services from non-employees. This ASU will be effective for the Company for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020, with early adoption permitted. The Company is currently assessing the timing of adoption and the impact that the adoption of ASU 2018-07 will have on its consolidated financial statements and related disclosures.

In August 2018, the FASB issued ASU No. 2018-13, Fair Value Measurements (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement as part of the FASB's disclosure framework project. ASU 2018-13 modifies the disclosure requirements on fair value measurements in Topic 820, Fair Value Measurement by removing the requirement to disclose amounts of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy, the policy for timing of transfers between levels, and the valuation process for Level 3 fair value measurements. This ASU also modifies existing disclosure requirements by clarifying that the measurement uncertainty disclosure is to communicate information

about the uncertainty in measurement as of the reporting date, and it adds required disclosures for the changes in unrealized gains and losses for the period included in other comprehensive income for recurring Level 3 fair value measurements held at the end of the reporting period, and the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. This ASU will be effective for the Company for fiscal years and interim periods within those fiscal years, beginning after December 15, 2019. The Company is currently assessing the impact of this ASU on its consolidated financial statements.

In November 2018, the FASB issued ASU No. 2018-18, Collaborative Arrangements (ASC 808): Clarifying the Interaction between ASC 808 and ASC 606, which clarifies that certain transactions between collaborative arrangement participants should be accounted for as revenue under ASC 606 when the collaborative arrangement participant is a customer in the context of a unit of account. In those situations, all the guidance in ASC 606 should be applied, including recognition, measurement, presentation and disclosure requirements. ASU 2018-18 adds unit-of-account guidance in ASC 808 to align with the guidance in ASC 606 (that is, a distinct good or service) when an entity is assessing whether the collaborative arrangement or a part of the arrangement is within the scope of ASC 606, and requires that in a transaction with a collaborative arrangement participant that is not directly related to sales to third parties, presenting the transaction together with revenue recognized under ASC 606 is precluded if the collaborative arrangement participant is not a customer. ASU 2018-18 will be effective for the Company for fiscal years beginning after December 15, 2020, and interim periods within fiscal years beginning after December 15, 2021. The Company is currently assessing the impact of this ASU on its condensed consolidated financial statements.

Quantitative and Qualitative Disclosures about Market Risk

The market risk inherent in our financial instruments and in our financial position represents the potential loss arising from adverse changes in interest rates or exchange rates. As of December 31, 2019, we had cash and cash equivalents of $77.4 million, consisting of interest-bearing money market accounts for which the fair market value would be affected by changes in the general level of United States interest rates. The December 31, 2019 information is preliminary and subject to adjustment. However, due to the short-term maturities and the low-risk profile of our investments, an immediate 10% change in interest rates would not have a material effect on the fair market value of our cash, cash equivalents and investments.

We do not believe that inflation, interest rate changes, or exchange rate fluctuations had a significant impact on our results of operations for any periods presented herein.

BUSINESS

Overview

We are a clinical-stage immunology-based biopharmaceutical company focused on discovering, developing and commercializing oral small molecule therapies for patients with significant unmet needs in oncology and inflammatory diseases. Utilizing our proprietary drug discovery and development engine, we are developing highly selective small molecules designed to modulate the critical immune responses underlying these diseases. In our first four years since inception, we have discovered and advanced two unique drug candidates each targeting C-C motif chemokine receptor 4 ("CCR4"). Our lead oncology drug candidate, FLX475, reached the clinic in just two and a half years and our lead inflammation drug candidate, RPT193, entered the clinic in August 2019. We are also pursuing a range of targets, including general control nonderepressible 2 ("GCN2") and hematopoietic progenitor kinase 1 ("HPK1"), that are in the discovery stage of development.

Our lead oncology drug candidate, FLX475, is designed to selectively inhibit the migration of immunosuppressive regulatory T cells ("T_{reg}") into tumors. In a Phase 1 clinical trial in 104 healthy volunteers, FLX475 was well tolerated and demonstrated favorable drug-like properties with a level of target engagement that, in our preclinical studies, corresponded with 90% inhibition of in vitro T_{reg} migration and the highest level of inhibition of in vivo T_{reg} migration and antitumor activity. FLX475 has also demonstrated single agent and combination activity in preclinical tumor models associated with the inhibition of T_{reg} migration into the tumor and an increase in the CD8 : T_{reg} ratio. We are currently conducting a Phase 1/2 clinical trial investigating FLX475 as a monotherapy and in combination with pembrolizumab (marketed as Keytruda) in order to study the safety and potential clinical activity of FLX475 in patients with advanced cancer. The Phase 2 portion of the trial will evaluate FLX475 as a monotherapy and in combination with pembrolizumab specifically in patients with several types of "charged" tumors, which represent cancer types we believe are most likely to respond to FLX475, and we anticipate results from the Phase 2 portion of the trial could provide clinical proof-of-concept ("PoC"). We intend to provide an initial data readout from the Phase 1/2 trial in the second quarter of 2020.

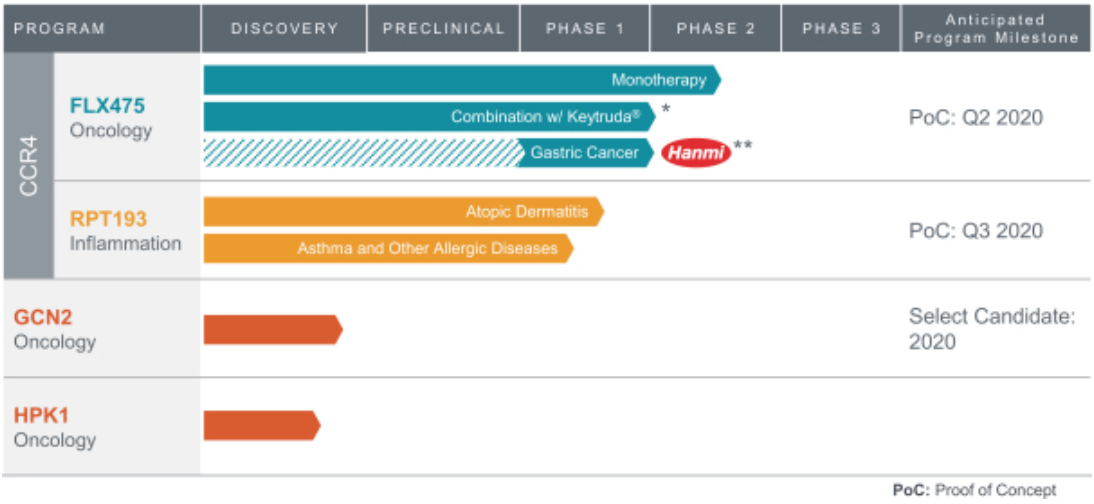
Our lead inflammation drug candidate, RPT193, is designed to selectively inhibit the migration of type 2 T helper cells ("Th2 cells"), into allergically-inflamed tissues. Th2 cells are clinically validated drivers of allergic diseases along the "atopic march" such as atopic dermatitis ("AD"), asthma, chronic urticaria (skin rash), allergic conjunctivitis, chronic rhinosinusitis and eosinophilic esophagitis (inflammation of the esophagus). We believe based on our preclinical pharmacology and Good Laboratory Practice ("GLP") toxicology results, if confirmed in clinical trials, combined with the convenience of once-daily oral dosing, RPT193, if approved by the FDA, could fill an unmet medical need for the treatment of allergic disorders. We initiated a first-in-human trial in August 2019 that we refer to as "seamless" given that it starts with healthy volunteers and then transitions directly into a cohort of patients with AD. We have completed the initial Phase 1a single and multiple dose escalation cohorts of healthy volunteers and the blinded safety, pharmacokinetic, and pharmacodynamic data from this Phase 1a portion of the trial have demonstrated the ability to achieve target drug levels and receptor occupancy with an acceptable safety profile using once-daily dosing of RPT193 in healthy volunteers. We expect to initiate the Phase 1b portion of the trial in AD patients in February 2020 and we anticipate reporting PoC results from this trial in the third quarter of 2020. Thereafter, we intend to expand clinical development into additional Th2-driven allergic indications.

In addition, we are identifying lead compounds that inhibit GCN2, which we believe is a fundamental regulator of antitumor immunity and tumor cell survival. Preclinical studies have demonstrated that a potential inhibitor of GCN2 (an "RPT-GCN2i"), has the ability to restore in vitro T cell proliferation and function in nutrient-deprived conditions, enhance tumor cell death and elicit antitumor responses in preclinical tumor models. We are developing an RPT-GCN2i with the intent of selecting a preclinical candidate in 2020.

We will continue to invest in our proprietary discovery and development engine and investigate several of our identified targets as well as generate additional target and drug candidates, including a future HPK1 drug candidate.

We internally discovered and designed all of our drug candidates. We hold worldwide rights to each of our drug candidates, with the exception of the exclusive license granted to Hanmi for FLX475 in the Republic of Korea, the Republic of China (Taiwan), and the People's Republic of China, including the special administrative regions of Macau and Hong Kong (the "Hanmi Territory").

Diversified Pipeline with Significant Milestones Anticipated in 2020



* Clinical collaboration with Merck
** Regional collaboration and license with Hanmi in the Hanmi Territory – Phase 2 gastric cancer trial to be initiated after combination recommended Phase 2 dose (RP2D) selected

Key Upcoming Milestones

Timing		Milestones		
		FLX475	RPT193	GCN2 Program
2020	Q2	Phase 2 PoC readout	Phase 1b enrollment completed	
	Q3		Phase 1b PoC readout	
	Q4	Expansion cohorts and potential registrational studies		Select Candidate

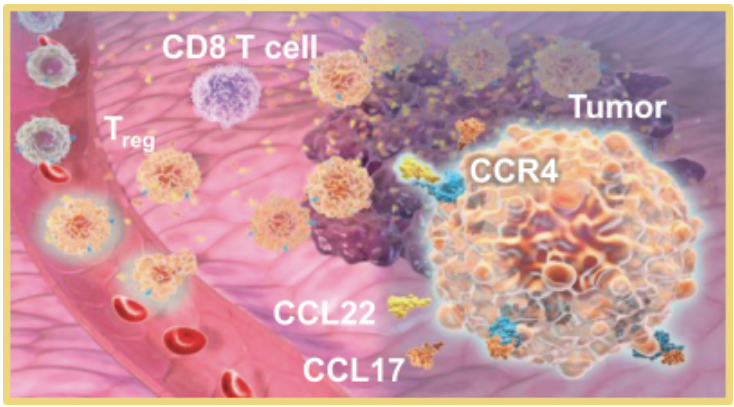
Our CCR4 Franchise

Our proprietary drug discovery and development engine has identified the cell surface receptor CCR4 as a drug target that potentially has broad applicability in oncology and inflammatory diseases. Receptors such as CCR4 bind to chemoattractant molecules called chemokines that orchestrate migration and homing of immune cells to specific tissues throughout the body. Chemokines specific for CCR4 are secreted from tumors and from allergically-inflamed tissues, but are not highly expressed in healthy tissues. Our approach is designed to enable selective restoration of the immune response within the tumor and allergically-inflamed tissues without systemically depleting immune cells and broadly suppressing the immune system. Each of our two unique drug candidates, FLX475 and RPT193, target CCR4 in a manner we believe is well suited for cancer and inflammatory disease, respectively.

CCR4 Antagonist for Oncology: FLX475

We are developing FLX475 for the treatment of a broad range of "charged" tumors, which represent cancer types we believe are most likely to respond to FLX475. In cancer, the secretion of certain chemokines from tumor cells and tumor-resident immune cells is responsible for recruitment of immunosuppressive T_{reg} to tumor sites. T_{reg} represent a dominant pathway for downregulating the immune response, and thus may limit the effectiveness of currently available therapies such as checkpoint inhibitors. Therefore, blocking the migration of T_{reg} has the potential to restore naturally-occurring antitumor immunity as well as to synergize with a variety of both conventional and immune-based therapies, such as radiation, chemotherapy, checkpoint inhibitors, immune stimulators and adoptive T cell therapy. We believe that the inhibition of CCR4 has the potential to bring therapeutic benefit to patients across a wide spectrum of tumors in a manner similar to other immuno-oncology therapies that have been shown to be effective against multiple tumor types, while also potentially deepening or broadening clinical responses to these therapies.

FLX475: Highly Selective Approach for Targeting Tumor T_{reg}

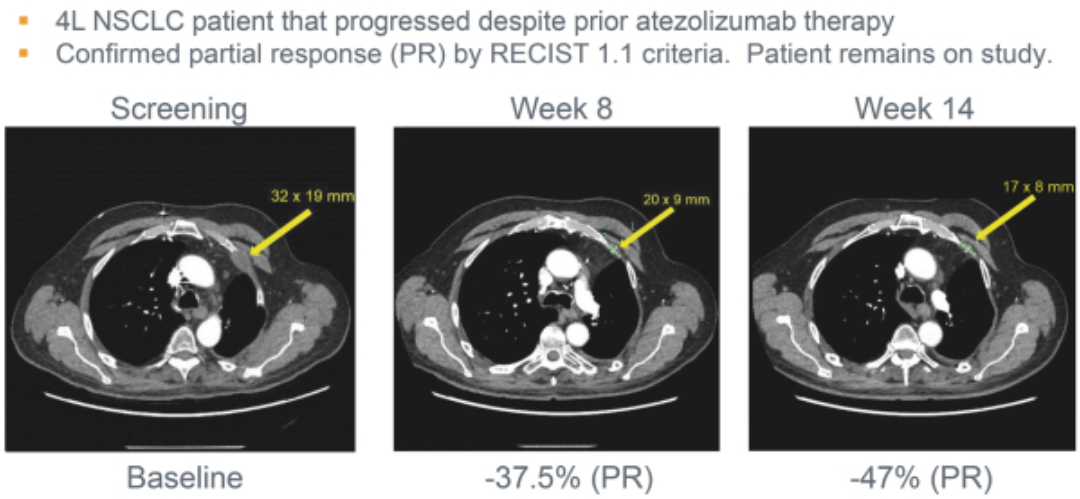


Our proprietary drug discovery and development engine has identified certain tumors in which the abundance of T_{reg} is likely to be a cause of immune suppression. We refer to these tumors as "charged," as defined by their expression of high levels of (i) CCR4 ligands, (ii) T_{reg} and (iii) $CD8^+$ effector cells. These "charged" tumors include tumor types such as non-small cell lung cancer ("NSCLC"), triple negative breast cancer ("TNBC"), head and neck squamous cell carcinoma ("HNSCC"), nasopharyngeal cancer ("NPC"), gastric cancer, certain Hodgkin ("HL") and non-Hodgkin lymphomas ("NHL"), and cervical cancer. Additionally, we have discovered that the presence of oncogenic viruses, such as Epstein-Barr virus ("EBV") and human papillomavirus ("HPV"), is associated with tumors that are highly "charged" and allows prospective patient selection.

FLX475 is a small molecule CCR4 antagonist that is designed to block the migration of T_{reg} specifically into tumors, but not healthy tissues, without depleting T_{reg} throughout the body, which we believe may decrease the likelihood of side effects. In preclinical tumor models, FLX475 appears to selectively bind to CCR4 and inhibit the migration of T_{reg} into tumors without affecting healthy tissue such as skin, blood or lymphoid organs, increase the number of $CD8^+$ effector T cells in the tumor and, as a single agent or in combination with checkpoint inhibitors, lead to tumor reduction or eradication. In addition, in preclinical tumor models, inhibition of CCR4 with FLX475 did not appear to negatively impact effector immune cells.

We have completed a placebo-controlled, double-blinded dose-escalating Phase 1 clinical trial of FLX475 in 104 healthy volunteers. The objectives of the trial were to evaluate the safety and tolerability, pharmacokinetics, and pharmacodynamics of single and repeat doses of FLX475 in human subjects. FLX475 was well tolerated and demonstrated dose-dependent inhibition of CCR4 with no observed immune-related adverse events or significant clinical adverse events. Daily dosing within the single dose arm ranged between 5 mg and 1,000 mg and in the multiple dose arm between 25 mg and 150 mg a day for 14 days. At the 75 mg daily dose, FLX475 exceeded the targeted receptor occupancy in six out of six healthy volunteers, which, in our preclinical studies, corresponded with a 90% inhibition of in vitro T_{reg} migration and the highest level of inhibition of in vivo T_{reg} migration and antitumor activity. We are currently conducting a Phase 1/2 trial of FLX475 as a monotherapy and in combination with pembrolizumab (marketed as Keytruda). The Phase 1 portion of the study is a standard dose escalation study intended primarily to evaluate safety, pharmacokinetics and pharmacodynamics in patients with multiple tumor types including some that may be “charged.” As we previously reported, a patient with NSCLC in the 50 mg FLX475 and Keytruda® (pembrolizumab) cohort that had failed prior treatment with anti-PD-L1 therapy (atezolizumab) has had a confirmed partial response (“PR”) under RECIST 1.1 criteria, based on radiological analysis performed at the clinical investigator site, with a 37.5% reduction in target lesion measurement at 8 weeks and a 47% reduction at 14 weeks. The patient remains on study and in response, and has been able to escalate his dose to 75 mg. The Phase 2 portion of the trial will evaluate FLX475 as a monotherapy and in combination with pembrolizumab specifically in patients with several types of “charged” tumors, which represent cancer types we believe are most likely to respond to FLX475, and we anticipate results from the Phase 2 portion of the trial could provide clinical proof-of-concept (“PoC”). We are currently enrolling the Phase 2 monotherapy expansion cohorts at a daily dose of 100 mg and in February 2020 we opened for enrollment the Phase 2 combination therapy expansion cohorts at a daily dose of 100 mg. We intend to provide an initial data readout from the Phase 1/2 trial in the second quarter of 2020. For more information regarding the risks associated with our Phase 1/2 clinical trial for FLX475, please see “Risk Factors—Risks Related to Our Business—FLX475 and PRT193 are in clinical development, which may fail or suffer delays that materially and adversely affect their commercial viability.”

Confirmed Partial Response in a Checkpoint Inhibitor-Refractory NSCLC Patient Treated with 50 mg FLX475+Keytruda®*



* Based on radiological analysis conducted at the clinical investigator site.

We own an issued U.S. composition of matter patent directed to FLX475 that is scheduled to expire in 2037 (not including any applicable extensions, if approved). We have entered into a collaboration and license agreement with Hanmi whereby we granted Hanmi the exclusive rights to develop, manufacture and commercialize FLX475 in the Hanmi Territory.

CCR4 Antagonist for Allergic Inflammatory Disease: RPT193

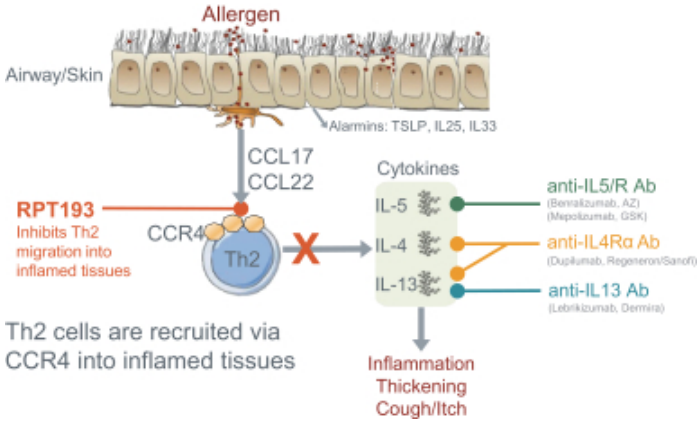
RPT193 is a small molecule CCR4 antagonist that blocks the recruitment of inflammatory immune cells, known as Th2 cells, which are clinically implicated in allergic inflammatory diseases. We are developing RPT193 for the treatment of a broad range of allergic inflammatory diseases, the first of which is AD, a chronic, inflammatory skin disease characterized by skin barrier disruption and immune dysregulation. We initiated a first-in-human trial in August 2019 we refer to as “seamless” given that it starts with healthy volunteers and then transitions directly into a cohort of patients with AD. In January 2020, we have completed the initial Phase 1a single and multiple dose escalation cohorts of healthy volunteers and the blinded safety, pharmacokinetic, and pharmacodynamic data from this Phase 1a portion of the trial have demonstrated the ability to achieve target drug levels and receptor occupancy with an acceptable safety profile using once-daily dosing of RPT193 in healthy volunteers. We expect to initiate the Phase 1b portion of the trial in AD patients in February 2020 and we anticipate reporting PoC results from this trial in the third quarter of 2020. Thereafter, we intend to expand clinical development into additional Th2-driven allergic indications.

While there are marketed injectable products for the treatment of AD, as well as oral and injectable drug candidates in development, we believe there is an unmet need for a safe and effective oral treatment. We believe based on our preclinical pharmacology and GLP toxicology results, if confirmed in clinical trials, combined with the convenience of once-daily oral dosing, RPT193, if approved by the FDA, could fill an unmet medical need for the treatment of allergic disorders.

CCR4 is highly expressed on Th2 cells. In allergic inflammatory diseases, including AD, chemokines recruit Th2 cells via CCR4 into inflamed tissues. Once Th2 cells enter tissues such as the skin or the airways in the lung, they secrete proteins known to drive the inflammatory response. The role of Th2 cells has been clinically validated by, among others, dupilumab, an injectable biologic targeting this pathway. Further evidence

of CCR4's role in AD includes the observation of higher levels of CCR4 ligands in AD patients compared with healthy humans; these ligands also correlate with the severity of disease. We believe that by inhibiting CCR4, RPT193 has the potential to bring therapeutic benefit to patients across a broad spectrum of additional allergic inflammatory diseases, including asthma, chronic urticaria, allergic conjunctivitis, chronic rhinosinusitis and eosinophilic esophagitis.

RPT193 Acts on a Well-Validated Pathway in AD and Asthma



We are developing RPT193 initially in AD because there is:

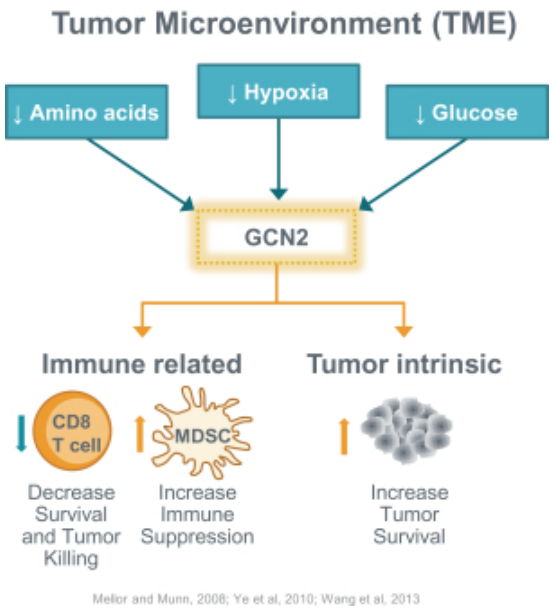
- an unmet need for a safe and effective oral treatment;
- a potentially efficient path to PoC, due to high prevalence of disease and short time to clinically relevant endpoints;
- a well-defined set of clinical endpoints that have historically been accepted for regulatory approval, which are usable for PoC as well as for subsequent pivotal studies;
- easy access to patient samples, such as skin biopsies, to interrogate mechanisms of action and clinical biomarkers of efficacy; and
- a precedent that PoC in AD has translated to other Th2-driven allergic inflammatory diseases.

We hold worldwide rights to RPT193 and have pending patent applications with respect to RPT193 that, if issued, would be scheduled to expire in 2039 (not including any applicable extensions, if approved).

GCN2 and HPK1 for Oncology

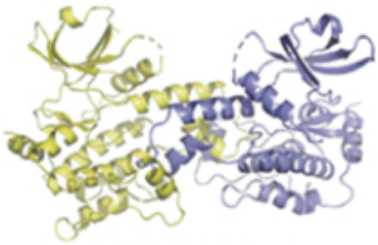
GCN2 is a fundamental driver of immune suppression and the survival of tumor cells under the conditions of metabolic stress typically seen in the tumor microenvironment ("TME"). Preclinical studies have shown that the inhibition of GCN2 can result in tumor cell death in vitro and restoration of immune function under these stress conditions. The GCN2 pathway is generally not active in healthy tissue suggesting the potential for a favorable therapeutic index for drugs targeting GCN2. Preclinical in vitro and in vivo studies have demonstrated that an RPT-GCN2i has the ability to increase T cell proliferation and function in nutrient-deprived conditions, to overcome immune suppression induced by myeloid-derived suppressor cells ("MDSC"), and to elicit antitumor responses in animal models. We are developing an RPT-GCN2i with the intent of selecting a preclinical candidate in 2020.

GCN2: Key Driver of Immunosuppression in the TME



HPK1 is a negative regulator of T cell activation, and the inhibition of HPK1 has the potential to enhance T cell function and antitumor activity. HPK1 was identified in a RAPT computational screen, which also identified clinically validated targets including PD-1, as well as CCR4. We are refining the chemical structure of our lead HPK1 compounds utilizing high resolution crystal structures and demonstrated that inhibition of HPK1 enhanced activation of primary mouse and human T cells in vitro, as well as antigen-specific CD8+ T cell effector function in vivo. Oral administration of an HPK1 inhibitor resulted in single agent antitumor activity and complete tumor regression in multiple mice when dosed in combination with a checkpoint inhibitor.

HPK1: Negative Regulator of T Cell Activation



Our Proprietary Drug Discovery and Development Engine

Through our team's deep expertise in immunology and drug discovery, supported by advanced computational biology, we are developing the ability to exploit difficult targets, including through proprietary know-how. We refer to this as our "proprietary drug discovery and development engine." This engine is built upon the following four key pillars:

- computationally-driven disease target and biomarker identification;

- efficient design of small molecule drug properties;
- data-driven patient selection; and
- nimble clinical execution.

We believe that the drug candidates generated from this engine, if approved, will significantly improve the treatment paradigms and outcomes for patients by fundamentally modulating the immune responses in a range of cancers and inflammatory diseases.

Our Team

Our management and scientific teams and scientific advisory board have substantial expertise in three areas key to our success: immunology, small molecule drug discovery and development and computational biology. Collectively, our executives have contributed to the research and development of multiple approved drugs, including Gazyva, Venclexta, Tavalisse, Actemra, Provenge and Xgeva.

We have assembled a leadership team and advisory group with a proven track record of success, and a team of scientists with substantial knowledge and expertise especially in human immune biology and also in the drug discovery and development and translational areas essential to execute on this approach. Our President and Chief Executive Officer, Brian Wong, M.D., Ph.D., previously served as Senior Vice President, Research, and Head of Immuno-Oncology at Five Prime Therapeutics and Director of Research in the Inflammation Disease Biology Area at Roche. Rodney Young, our Chief Financial Officer, previously served as Chief Financial Officer at each of Cellerant Therapeutics, Inc., Aimmune Therapeutics, Inc. and StemCells, Inc. William Ho, M.D., Ph.D., our Chief Medical Officer, previously led clinical development at Igenica Biotherapeutics and the development of multiple products at Genentech including Gazyva and Venclexta. Our Chief Scientific Officer, Dirk Brockstedt, Ph.D., previously served as Executive Vice President of Research and Development at Aduro Biotech. Our Vice President, Quantitative and Computational Biology, Paul Kassner, Ph.D., previously served as Director of Research and Head of the Genome Analysis Unit at Amgen. Before joining RAPT, our Senior Vice President of Drug Discovery and Preclinical Development, David Wustrow, Ph.D., most recently served as Vice President, Chemical and Pharmaceutical Sciences at Cleave Biosciences. Our Vice President, Finance and Corporate Controller, Karen C. Lam, previously served as Senior Director, Controller of True North Therapeutics and Director, Controller at iPierian and Ms. Lam is a Certified Public Accountant (inactive).

Our management team is supported by a scientific advisory board comprised of leading clinicians and scientific researchers, including Alexander Rudensky, Ph.D. (Memorial Sloan Kettering Cancer Center); Antoni Ribas, M.D., Ph.D. (UCLA); Scott Antonia, M.D., Ph.D. (Duke University); Drew Pardoll, M.D., Ph.D. (Johns Hopkins University); Philip Greenberg, M.D., Ph.D. (Fred Hutchinson Cancer Research Center); Robert Zamboni, Ph.D. (McGill University); Emma Guttman-Yassky, M.D., Ph.D. (Mt. Sinai); and David Goeddel, Ph.D. (The Column Group). Our clinical advisors also include Jasmina Jankicevic, M.D. (Premier Research); Thomas Bieber, M.D. (University of Bonn, Germany); and Andrew Blauvelt, M.D., M.B.A. (Oregon Medical Research Center).

Our Strategy

- **Advance our lead oncology candidate, FLX475, through clinical development to commercialization in "charged" tumor types, which represent cancer types we believe are most likely to respond to FLX475**. We expect to rapidly evaluate FLX475's efficacy in multiple tumor types both as a single agent and in combination with other immuno-oncology agents such as programmed cell death 1 ("PD-1") checkpoint inhibitor. Our goal is to expeditiously progress into registration trials to ultimately enable treatment of cancer patients for whom current treatments are inadequate.

- **Enhance the impact of our lead inflammation candidate, RPT193, by expanding development across multiple allergic diseases.** We are initially developing RPT193 for AD because the characteristics of the disease present an opportunity to rapidly demonstrate RPT193's anti-inflammatory effect. We believe this anti-inflammatory effect, along with its convenient oral administration and good safety profile both in preclinical studies and in healthy volunteers, has potential clinical translatability in a variety of allergic diseases beyond AD, including allergic asthma, chronic urticaria, chronic rhinosinusitis, allergic conjunctivitis and eosinophilic esophagitis.

- **Develop and advance a preclinical RPT-GCN2i into clinical trials.** We view our preclinical programs as important drivers of long-term growth and stability of our company. Our goal is to rapidly advance our programs to generate validating preclinical data that warrant clinical development.

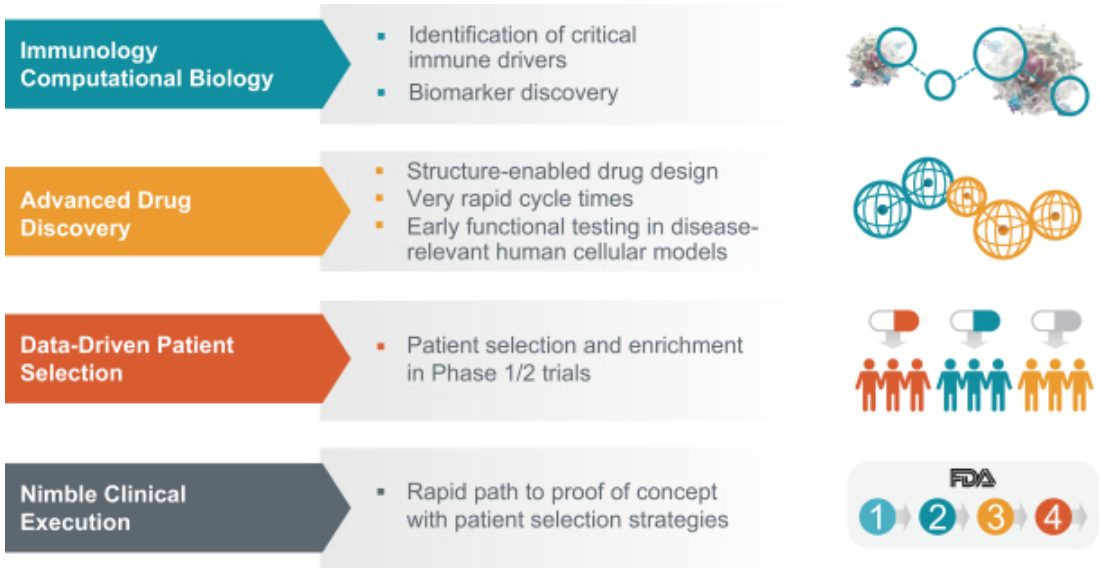
- **Expand our pipeline by leveraging our proprietary drug discovery and development engine and small molecule expertise.** We believe there are additional identifiable targets that will be important to fundamentally modulating the immune response in the treatment of cancer and inflammatory diseases. We will continue to invest in our proprietary discovery and development engine and investigate several of our identified targets as well as generate additional target and drug candidates, including a future HPK1 drug candidate.

- **Utilize collaborations in support of our long-term goals.** We plan to selectively use collaborations and partnerships as strategic tools to maximize the value of our drug candidates.

Drug Discovery and Development Engine

We credit our rapid identification of therapeutic targets and drug candidate selection to our proprietary drug discovery and development engine, which relies on our team's deep expertise in immunology and chemistry, supported by strong computational biology and the ability to exploit difficult targets through our advanced discovery engine. The key pillars of our proprietary drug discovery and development engine are as follows.

Our Integrated Drug Discovery and Development Engine is Designed to Improve Probability of and Speed to Clinical Success



1) **Computationally-Driven Disease Target and Biomarker Identification.** We use proprietary methods to identify targets that we believe have a high propensity to drive the immune response in disease states such as in oncology and inflammatory diseases by computationally screening a combination of proprietary and public databases. Through this process we also identify biomarkers that can guide our clinical development strategy and increase the probability of clinical success. A computational screen we designed to seek tumor-infiltrating lymphocyte modulating genes identified CCR4 and HPK1 as potential targets. In addition to well-known and clinically validated targets such as PD-1 and cytotoxic T-lymphocyte associated protein 4 ("CTLA-4"), our target identification approach has also uncovered what we believe are key immune drivers of pathology that have not been fully explored but which may offer significant therapeutic potential. We have designed additional screens that have identified potential targets controlling (i) tumor and immune metabolism, (ii) resistance to checkpoint therapy and (iii) suppressive myeloid cells.

2) **Efficient Design of Small Molecule Drug Properties.** Key to our rapid discovery of small molecules is our use of structure and pharmacophore-based drug design strategies, and machine-learning assisted structure-activity-relationships to improve potency, selectivity and pharmacokinetic ("PK") properties, along with early testing in physiologically-relevant immune assays to rapidly identify highly selective, orally-administered small molecules. This seamless integration of biology, chemistry and pharmacokinetic disciplines allows for rapid cycle times and quick iterations between hypothesis and compound selection. An example is our lead CCR4 program that moved from concept to first-in-human testing in two and a half years. Using pharmacophore modeling we identified novel templates that selectively inhibit the CCR4 receptor. These were then rapidly refined for biological activity and robust oral bioavailability. Once lead candidates are identified, strong in-house synthetic expertise quickly develops improved synthetic methodologies that facilitates large scale synthesis needed for broader testing. Employing these techniques allowed us to assess a variety of novel chemical structures to derive our clinical candidates FLX475 and RPT193, which have favorable potency and PK properties. We are now utilizing similar strategies and leveraging novel structure-based drug design techniques to improve potency, selectivity and pharmacokinetic properties to identify leads in our GCN2 and HPK1 programs.

3) **Data-Driven Patient Selection.** A key strategy for every program is to identify a patient selection and enrichment approach. Our proprietary drug discovery and development engine enables enrichment and prospective selection of patients in our early clinical trials that we believe increase the probability of clinical success. Using proprietary and public databases, we can mine contextually-rich molecular and clinical data from disease tissues to identify tumor types and inflammatory disease indications that we believe will be most likely to respond to our therapeutic agents.

4) **Nimble Clinical Execution.** We believe our precision medicine approach enables a rapid path to PoC and the potential for accelerated regulatory approval.

We have leveraged this engine to identify and target CCR4, a key driver of the immune response in both oncology and allergic inflammatory disease. For FLX475, we achieved a rapid pace from concept to the clinic in only two and a half years, with RPT193 having entered the clinic in August 2019 with the healthy volunteer portion of the Phase 1 study completed as of January 2020.

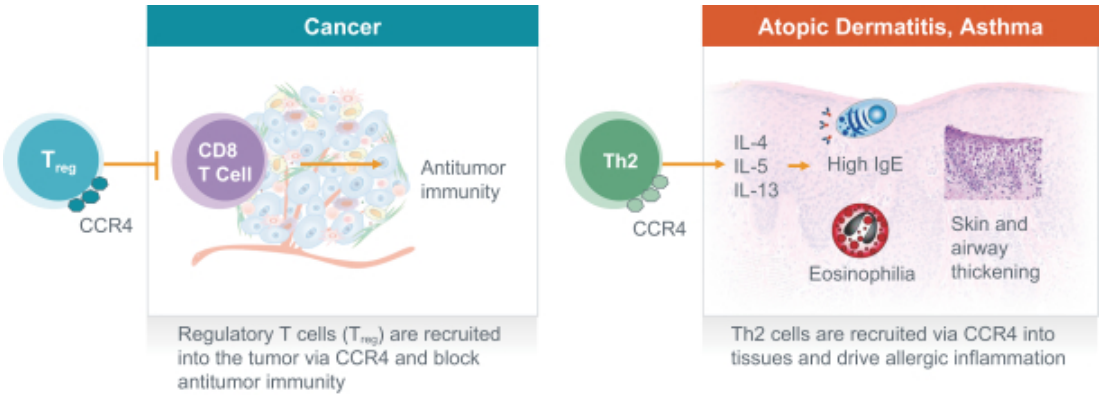
Background on CCR4 in Oncology and Allergic Inflammatory Disease

CCR4: A Key Modulator Across the Immunological Continuum

The immune system is a series of complex interactions between different types of white blood cells. T cells are one category of these cells that play crucial roles in immunological memory, regulation and responses.

One subset of these T cells that are characterized by the cluster of differentiation 4 (“CD4”) glycoprotein on their cell surfaces, the CD4 T cells, are paramount in directing immune responses and immune tolerance. Two main CCR4-expressing CD4 T cells of clinical interest are called T_{reg} and Th2 cells. T_{reg} and Th2 cells both express CCR4, which is a receptor that binds to chemokines that orchestrate cell migration and homing throughout the body. The two chemokines that bind to this receptor, C-C motif chemokine ligand 17 (“CCL17”) and C-C motif chemokine ligand 22 (“CCL22”), are over expressed and secreted by tumors and allergically inflamed tissues. This over expression allows for the theoretical manipulation of CCR4 and, consequently, its two CD4 T cell subtypes to address diseases across the immunological continuum spanning underactive to overactive immune responses in oncology and allergic inflammatory disease.

CCR4 Drives Tumor Progression and Allergic Inflammation



CCR4: Modulating Underactive Immune Activity in Oncology

In cancer, the secretion of certain chemokines from tumor cells and tumor-resident immune cells recruits immunosuppressive T cells called T_{reg} to tumor sites. T_{reg} represent a dominant pathway for downregulating the immune response. Blocking the migration of T_{reg} has been shown to have both the potential to unleash naturally-occurring antitumor immunity and to synergize with a variety of both conventional and immune-based therapies, such as radiation, chemotherapy, checkpoint inhibitors and adoptive T cell therapy. T_{reg} recruitment into tumors is dependent on CCR4, whose ligands are produced by tumor cells themselves or by tumor-associated macrophages. CCR4 is highly expressed on T_{reg} and not highly expressed or used by effector or cytotoxic T cells, suggesting that targeting CCR4 may selectively block T_{reg} migration into tumors. We believe that a therapeutic drug that specifically inhibits T_{reg} migration into tumors has the potential to specifically enhance immuno-oncology efficacy without the serious risks associated with current CCR4 approaches that systemically deplete T cells and broadly suppress the immune system.

CCR4: Modulating Overactive Immune Activity in Inflammation

In allergic inflammatory diseases, such as AD and asthma, CCR4 chemokines recruit Th2 cells to inflamed tissues. Once these cells enter certain tissues, such as the skin or the airways in the lung, they secrete products known to drive the inflammatory response. In allergic asthma, Th2 cells have been demonstrated to play a pivotal role in airway inflammatory response and airway remodeling. CCR4 is essential in recruiting Th2 cells to asthmatic airways. Similarly, murine models and ex vivo studies strongly suggest that CCR4 plays a critical role in allergic inflammation in AD. Blocking the migration of Th2 cells has been shown to reduce allergic inflammation in the skin and the lung. We believe that CCR4 antagonists have the potential to suppress allergic inflammation in patients in a clinically meaningful manner.

Our Lead Oncology Drug Candidate—FLX475

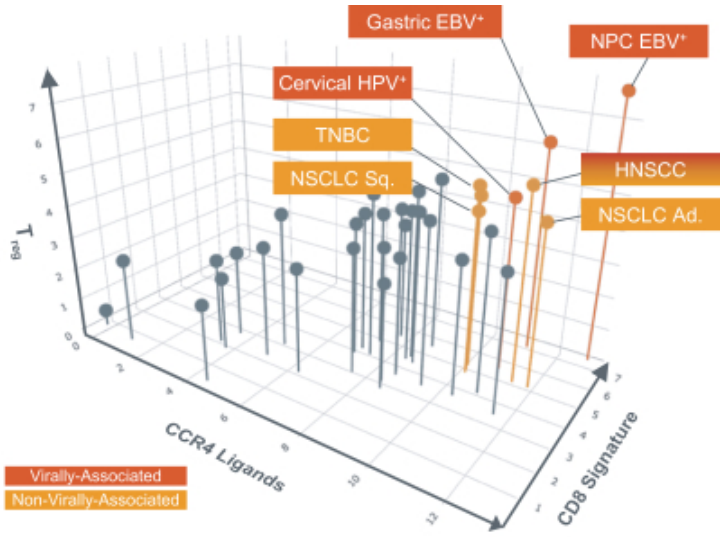
Our lead oncology drug candidate, FLX475, is designed to selectively inhibit the migration of immunosuppressive T_{reg} into tumors. In a Phase 1 clinical trial in 104 healthy volunteers, FLX475 was well tolerated and demonstrated favorable drug-like properties and target engagement. FLX475 has also demonstrated single agent and combination activity in preclinical tumor models associated with the inhibition of T_{reg} migration into the tumor and an increase in the CD8 : T_{reg} ratio. We are currently conducting a Phase 1/2 clinical trial investigating FLX475 as a single agent and in combination with pembrolizumab. The Phase 2 portion of the trial will evaluate FLX475 as a monotherapy and in combination with pembrolizumab specifically in patients with several types of "charged" tumors, which represent cancer types we believe are most likely to respond to FLX475, and we anticipate results from the Phase 2 portion of the trial could provide clinical proof-of-concept ("PoC"). We intend to provide an initial data readout in the second quarter of 2020.

We own an issued U.S. composition of matter patent directed to FLX475 that is scheduled to expire in 2037 (not including any applicable extensions, if approved). We have entered into a collaboration and license agreement with Hanmi, whereby we granted Hanmi the exclusive rights to develop, manufacture and commercialize FLX475 in the Hanmi Territory.

CCR4 in Charged Tumors

Our proprietary drug discovery and development engine has identified certain tumors where we believe FLX475 has the greatest probability of demonstrating clinical benefit. We refer to these tumors as "charged" as defined by (i) their expression of high levels of CCR4 ligands, (ii) their enrichment for T_{reg} and (iii) their enrichment for $CD8^+$ effector cells. Tumors with high levels of these three parameters imply they have the necessary components to generate a potent immune response; however, the presence of T_{reg} dampens this response. As shown in the diagram below, we have identified numerous tumors as being charged, including NSCLC, TNBC, HNSCC, NPC, gastric cancer, EBV^+ HLs and NHLs and cervical cancer. The data presented in the diagram below was derived from an in-house analysis of The Cancer Genome Atlas Database and additional published sources and confirmed by us through in situ hybridization of over 400 tumor microarray samples.

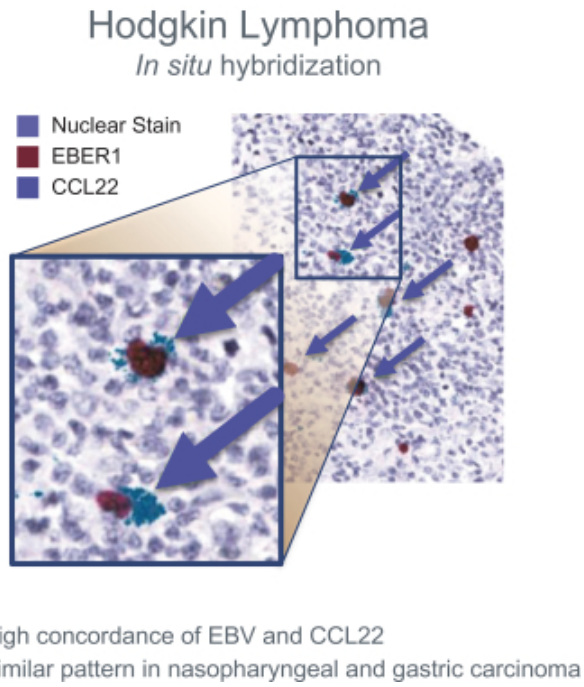
Identification and Characterization of "Charged" Tumors



The graph above reflects a logarithmic scale on each axis.

Additionally, we have discovered that the presence of oncogenic viruses, such as EBV, (as shown in the diagram below) and HPV, is associated with tumors that are highly "charged" and can be prospectively selected. In preclinical studies, we have demonstrated an association between EBV and CCR4 ligand expression, which is believed to be causal to T_{reg} migration. These studies are further validated by scientific publications linking EBV to T_{reg} tumor infiltration in HL, gastric cancer and NPC.

"Charged" Tumors Include EBV-Associated Tumors



EBER1 = EBV-encoded RNA1

Oncology Market Overview

Significant progress in cancer treatment has been made recently with the development of highly targeted and immuno-oncology-based therapies. Remarkable clinical response rates have been observed with targeted therapies in selective patient populations, while in a subset of a broad range of tumors, immuno-oncology products have demonstrated durable responses and possible cures. Although true breakthroughs have been achieved, often only a very narrow segment of the patient population can be treated or are responsive to these novel therapies. Hence, there remains a significant unmet medical need for a majority of tumor types including "charged" tumors in which we intend to develop FLX475 either as single agent or in combination with immune checkpoint inhibitors such as pembrolizumab or other agents.

A Large Proportion of Multiple Tumor Types are "Charged"

Tumor Type	Prevalence* (U.S.)	Virally Associated	Percent Viral	Estimated Percent "Charged"**
Non-Small Cell Lung Cancer	268,600	N/A	N/A	60-80%
Triple Negative Breast Cancer	145,500	N/A	N/A	
Head and Neck Squamous Cell Carcinoma	143,000	✓	25%-60%	
Nasopharyngeal Cancer	105,000***	✓	>95%	>90% of virally associated tumors
Hodgkin Lymphoma	28,500	✓	30%-50%	
Cervical Cancer	46,800	✓	>95%	
Non-Hodgkin Lymphoma	225,000****	✓	Widely variable among subtypes	

* Based on 2012 Globocan registries 5-year prevalence (2008-2012 estimates)
** Data from in-house analysis
*** Worldwide prevalence
**** Based on 2018 Globocan registries 5-year prevalence (2013-2018 estimates)

Non-Small Cell Lung Cancer

NSCLC is the most common type of lung cancer, representing 84% of all lung cancer cases in the United States. Squamous cell carcinoma ("NSCLC Sq."), adenocarcinoma ("NSCLC Ad."), and large cell carcinoma are all subtypes of NSCLC. Lung cancer is the leading cause of cancer death for both men and women. In 2019, an estimated 142,670 people in the United States will die from lung cancer. There are approximately 228,000 diagnoses of lung cancer annually in the United States. Despite the availability of numerous available therapies, the prognosis remains poor, with an overall five-year survival rate for all patients diagnosed with NSCLC as low as 19.4%.

Standard therapies include surgery, chemotherapy and radiation therapy. Up to a third of NSCLC patients have tumors with mutations in genes (such as epidermal growth factor receptor and anaplastic lymphoma kinase) for which molecularly-targeted therapies have been approved (such as erlotinib, gefitinib or crizotinib). However, these treatments usually do not result in long-term remissions, and the tumors generally return and become resistant to therapy.

Immunotherapies that target PD-1 or the PD-1 ligand ("PD-L1") (e.g. pembrolizumab, nivolumab and atezolizumab) have recently been approved for the treatment of patients with advanced or metastatic NSCLC either alone (for previously untreated or treated patients), or in combination with chemotherapy (for previously untreated patients). While treatment with these immunotherapy agents in NSCLC has resulted in promising activity ranging from approximately 15-30% overall response rates in previously treated patients to approximately 40-60% response rates in combination with chemotherapy in previously untreated patients. However, approximately 50-80% of patients do not respond to these therapies, indicating significant unmet medical need remains.

Triple-Negative Breast Cancer

Breast cancer is the most common type of invasive cancer among women and the second leading cause of cancer death. The Centers for Disease Control and Prevention ("CDC") estimates that there are approximately one million women in the United States living with breast cancer that has been diagnosed within the past five years. In 2019 there will be an estimated 271,270 new diagnoses and 42,260 breast cancer deaths in the United

States each year and 12.4% of women will develop breast cancer in their lifetime. Effective therapies have been developed that target tumors containing at least one of three protein receptors: estrogen receptor, progesterone receptor and human epidermal growth factor receptor 2 (“HER2”).

Approximately 15% to 20% of breast cancers, however, do not express any of these three receptors and are referred to as triple-negative breast cancer (“TNBC”). These tumors have a more aggressive phenotype and a poorer prognosis due to the high propensity for metastatic progression and absence of specific targeted treatments. Prior to the recent anti-PD-L1 approval, the only approved targeted therapy for TNBC was olaparib (marketed as Lynparza) for the small minority of patients with mutations in the BRCA1 or BRCA2 genes. The five-year survival rate for TNBC has been reported to be 62.1%.

However, there is also potential for immuno-oncology agents in TNBC based on its high tumor mutation burden and the finding of elevated levels of PD-L1 in up to 26% of primary TNBCs. Treatment of previously untreated metastatic TNBC patients can result in approximately 20-25% response to PD-(L)1 checkpoint inhibitors. The anti-PD-L1 antibody atezolizumab (marketed as Tecentriq) was recently granted accelerated approval in combination with chemotherapy for the initial treatment of women with advanced TNBC expressing PD-L1. However, in previously treated TNBC, response rates to anti-PD-L1 agents alone have generally been less than 10%, representing substantial need for novel and improved therapies for advanced or metastatic TNBC.

Head and Neck Squamous Cell Carcinoma

HNSCC represent a broad category of cancers that arise from different tissues that have been grouped anatomically in the head and neck region. HNSCC accounts for about 4% of all cancers in the United States with an estimated 53,000 new cases and 10,860 deaths in 2019. The five-year survival rate for people with head and neck cancer varies and depends on several factors making an overall five-year survival rate difficult to track accurately. Most cases of HNSCC are considered to be related to use of tobacco, alcohol, or to the exposure to HPV.

Treatment for HNSCC can include surgery, radiation therapy, chemotherapy, targeted therapy or a combination of treatments. These tumors are believed to express a fair number of tumor-specific antigens, making them attractive targets for immunotherapies. Nivolumab and pembrolizumab have been approved for recurrent and metastatic HNSCC based on their ability to shrink tumors and increase median survival. However, treatment with either agent led to partial or complete tumor shrinkage in approximately 15% of treated HNSCC patients, indicating that over 80% of patients do not respond to therapy and that a significant unmet clinical need remains.

Nasopharyngeal Cancer

NPC is a cancer that forms in the tissues of the nasopharynx which is the upper part of the throat behind the nose. It is estimated that approximately 129,000 NPC patients worldwide were diagnosed and 72,900 NPC patients died in 2018. Approximately 39% of patients are diagnosed with late stage NPC, in which the five-year survival rate is 38%. While there is no known cause of NPC, EBV is associated with a vast majority of cases.

Standard treatment for NPC involves radiation therapy, chemotherapy and surgery. There is some evidence that NPC can be treated with immuno-oncology agents. A Phase 1b trial in patients with recurrent or metastatic NPC found an objective response rate of 26% with a PD-1 inhibitor pembrolizumab. While promising, novel therapies for NPC are still needed to improve overall responses and prolong survival.

Hodgkin Lymphoma

Hodgkin lymphoma, formerly called Hodgkin’s disease, is a cancer of the lymphatic system that arises in immune cells called B cells. HL accounts for approximately 10% of all lymphomas and approximately 0.6%

of all cancers diagnosed in the developed world annually. Approximately 8,100 people in the United States are estimated to be diagnosed with HL in 2019, with an estimated 1,000 deaths. EBV has been associated with approximately 30% to 50% of HL.

While approximately 75% of patients can be cured with standard therapies including combination chemotherapy, radiation therapy, high-dose chemotherapy and stem cell transplantation, novel therapies are being developed to further improve clinical outcomes. The CD30-directed antibody-drug conjugate brentuximab vedotin (marketed as Adcetris) has been approved for certain adult patients with classical HL ("cHL"). Nivolumab and pembrolizumab are immunotherapies that have been granted accelerated approval for the treatment of patients with cHL that has recurred or progressed after multiple previous treatments, including autologous transplantation and post-transplant treatment with brentuximab vedotin. For both pembrolizumab and nivolumab, the overall response rate in these relapsed and refractory cHL was approximately 69%. However, the average duration of response to these anti-PD-1 therapies is less than a year, signifying the need for continued advances.

Non-Hodgkin Lymphoma

NHL, another cancer of the lymphatic system, is not a single disease but rather a group of cancers affecting cells of the immune system. Although the various types of NHL have common elements, they differ in other areas, including their appearance under the microscope, their molecular features, their growth patterns, their impact on the body, and treatment. According to the National Cancer Institute, in the United States approximately 74,200 patients were diagnosed with NHL in 2018 and 19,910 patients died as a result of NHL in 2018. The five-year survival rate is 71.4%. While there is no direct cause of NHL, it is generally linked to a weakened immune system and begins when the body produces too many abnormal lymphocytes.

There is a wide range of therapies available for the treatment of NHL depending on the subtype of the disease, its aggressiveness and the patient's overall health. These include chemotherapy; radiation therapy; immunotherapy such as monoclonal antibodies; checkpoint inhibitors and chimeric antigen receptor T cells ("CAR-T cells"); targeted therapies; and stem cell transplantation. Depending upon the analysis and subtype, EBV has been associated anywhere from less than 10% to greater than 90%, or approximately 12% of NHL, on average.

Cervical Cancer

Cervical cancer begins with abnormal changes in the cervical tissue. In the United States, 13,170 patients are estimated to be diagnosed with cervical cancer in 2019 with cervical cancer leading to 4,250 deaths. The five-year survival rate is 65.8%. It is almost always associated with the presence of HPV.

Advanced cervical cancer is treated by chemotherapy or radiation therapy. Pembrolizumab has been approved in those patients that express PD-L1 based on a Phase 2 trial in which the response rate was 14.3%. While the approval of pembrolizumab has been an advance in the treatment of cervical cancer, over 80% of patients do not respond to this therapy, indicating significant room for improvement.

Our Oncology Solution: FLX475

T_{reg} represent a dominant pathway for downregulating the immune response. Many current approaches to deplete T_{reg} in the tumor have resulted in systemic T_{reg} depletion, and such approaches been associated with serious safety issues (such as autoimmunity). In addition, these approaches have been associated with the depletion of effector immune cells, which has the potential to limit their efficacy.

FLX475 is an oral small molecule that is designed to selectively inhibit the migration of immunosuppressive T_{reg} into tumors while sparing T_{reg} in healthy tissues and without negatively impacting

effector immune cells. We will initially develop FLX475 in "charged" tumors, in which we believe there remains significant unmet medical need. In preclinical studies, our drug candidate appears to selectively restore the immune response within the TME without systemically depleting T cells. We believe FLX475 has attractive characteristics for use as a single agent and in combination regimens with a variety of both conventional and immune-based therapies given its favorable safety profile observed to date in preclinical studies and in healthy volunteers, as well as the synergistic nature of its mechanism of action as demonstrated in preclinical mouse models.

In a Phase 1 clinical trial in 104 healthy volunteers, FLX475 was well tolerated and demonstrated dose-dependent inhibition of CCR4 with no observed immune-related adverse events or significant clinical adverse events. We are currently conducting a Phase 1/2 trial of FLX475 as a monotherapy and in combination with pembrolizumab (marketed as Keytruda). The Phase 1 portion of the study is a standard dose escalation study intended primarily to evaluate safety, pharmacokinetics and pharmacodynamics in patients with multiple tumor types including some that may be "charged." The Phase 2 portion of the trial will evaluate FLX475 as a monotherapy and in combination with pembrolizumab specifically in patients with several types of "charged" tumors, which represent cancer types we believe are most likely to respond to FLX475, and we anticipate results from the Phase 2 portion of the trial could provide clinical proof-of-concept ("PoC"). We intend to provide an initial data readout from the Phase 1/2 trial in the second quarter of 2020.

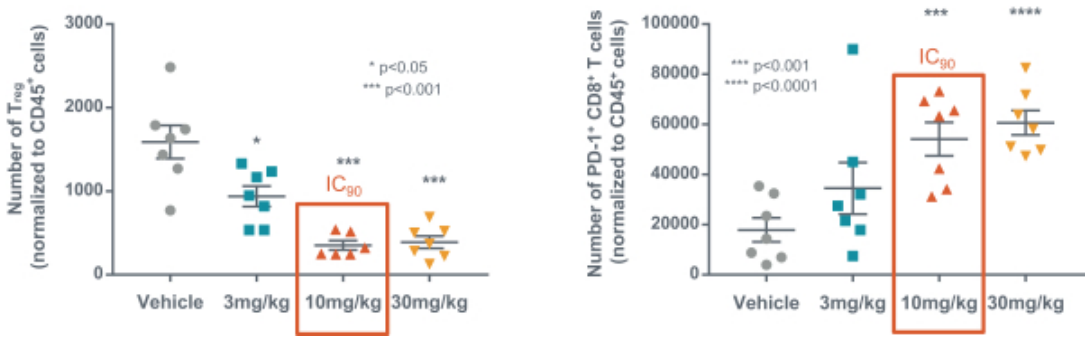
FLX475 Preclinical Data

We evaluated the mechanism of action as well as the antitumor activity of FLX475 (or a preclinical tool CCR4 antagonist) in two kinds of preclinical mouse tumor models representing the human equivalent of (i) a "charged" tumor and (ii) tumors that accumulated T_{reg} in the TME following checkpoint inhibitor treatment.

FLX475 Inhibition of T_{reg} in a Mouse Model of a "Charged" Tumor

Immunosuppressive $CCR4^+$ T_{reg} migrate towards CCL17 and CCL22 which are often found to be elevated in the TME. FLX475 inhibited in a dose-dependent manner CCL22- and CCL17-induced migration of T_{reg} in cellular in vitro migration assays. Dosing of FLX475 prevented migration of T_{reg} into established tumors expressing high levels of CCR4 ligand at baseline ("charged" tumor), as represented by a Pan02 mouse tumor model. In this model, mice with established tumors were dosed with FLX475, then injected with labeled T_{reg}. The migration of these modified T_{reg} into tumors could then be easily followed and quantified. In two independent experiments with seven mice per experimental arm, FLX475 inhibited this migration in a statistically significant and dose-dependent manner ($p < 0.01$). In these studies a dose of 10 mg/kg reduced T_{reg} migration by averages of 56% and 78% in the two studies, with individual animals ranging from 42% to 85% reduction. Blocking the migration of T_{reg} into tumors also enhanced the activation and increased the number of $CD8^+$ effector cells in a dose-dependent manner with a 3-fold increase at the 10 mg/kg dose level (range from 1.7 to 4.1 fold in individual animals in one experiment). The highest level of inhibition of T_{reg} migration and increase in $CD8^+$ effector cells was observed in our preclinical studies at 10 mg/kg given once daily, which achieves concentrations that inhibit 90% of in vitro T_{reg} migration ("IC_{90}") throughout the dosing period.

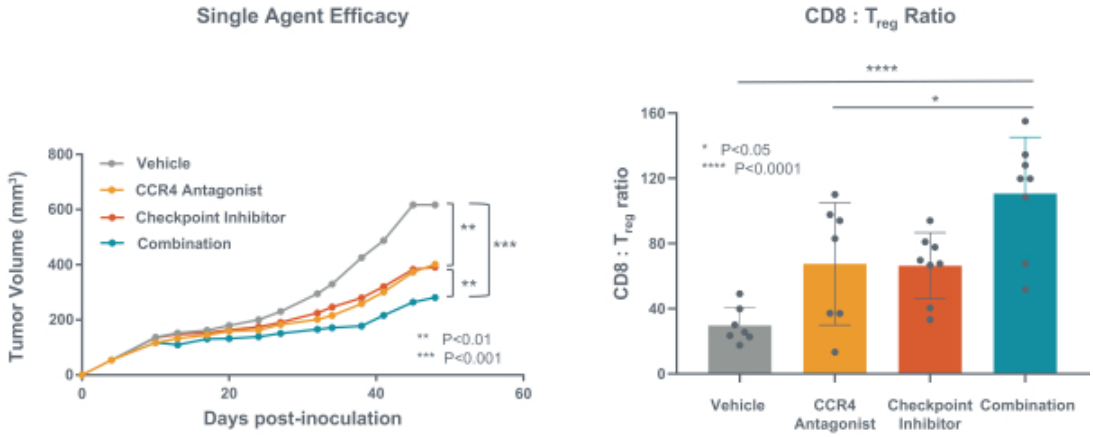
Blocking CCR4 with FLX475 Inhibits T_{reg} Migration into the Tumor



CCR4 Antagonist Single Agent Antitumor Activity in a Mouse Model of a "Charged" Tumor

The antitumor activity of a CCR4 antagonist closely related to FLX475 was assessed in the Pan02 mouse tumor model, which represents a "charged" tumor. In three independent experiments with ten mice per experimental arm, oral administration of the CCR4 antagonist demonstrated single agent reduction in tumor growth which was statistically significantly different from mice who received vehicle control ($p < 0.05$). The observed antitumor activity was similar to an immune checkpoint inhibitor in three of four experiments. Importantly, the combination of our CCR4 antagonist with the checkpoint inhibitor resulted in enhanced antitumor activity. Analysis of the TME of seven to eight mice per experimental arm treated with our CCR4 antagonist showed a statistically significant increase in the CD8 : T_{reg} ratio compared to vehicle control and similar activity compared to the checkpoint inhibitor. Consistent with the antitumor activity, combination of our CCR4 antagonist with the immune checkpoint inhibitor further increased this ratio. The increase of this ratio demonstrates a shift from an immune-suppressive to an immune-stimulatory environment. The CD8 : T_{reg} ratio is a well-established biomarker in human clinical trials and has been demonstrated to correlate with clinical outcome.

CCR4 Antagonist: Single Agent Activity in a Mouse Model of a "Charged" Tumor

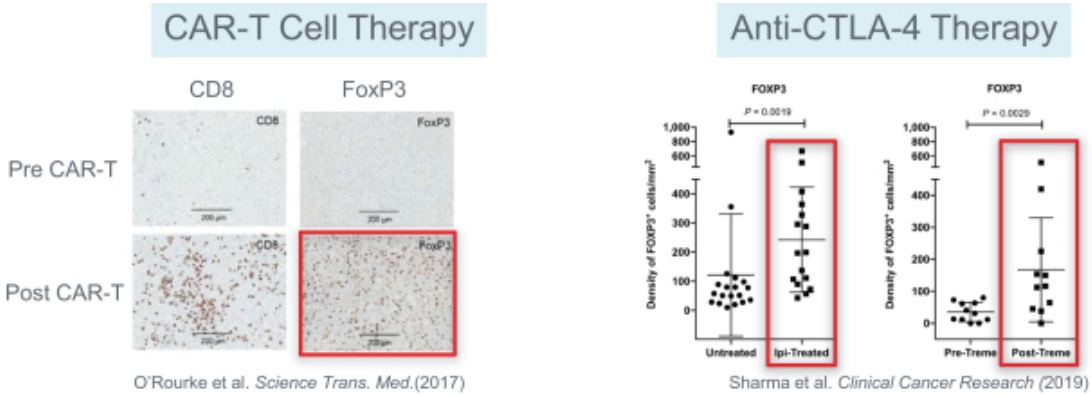


CCR4 Antagonism of T_{reg} Migration Following Checkpoint Inhibitor Treatment in Mouse Model of a Non-"Charged" Tumor

Clinical studies have demonstrated the accumulation of T_{reg} in the TME following treatment with conventional therapies such as chemotherapy and radiation, as well as immune-based therapies such as CAR-T

cell and checkpoint inhibitor therapies. The figure below shows several examples of T_{reg} accumulation in the TME of patients who underwent treatment with CAR-T cell or anti-CTLA-4 immune checkpoint inhibitor therapies. FoxP3 is a marker used to identify T_{reg}. Ipilimub (Ipi) and Tremelimumab (Treme) are both anti-CTLA-4 antibodies.

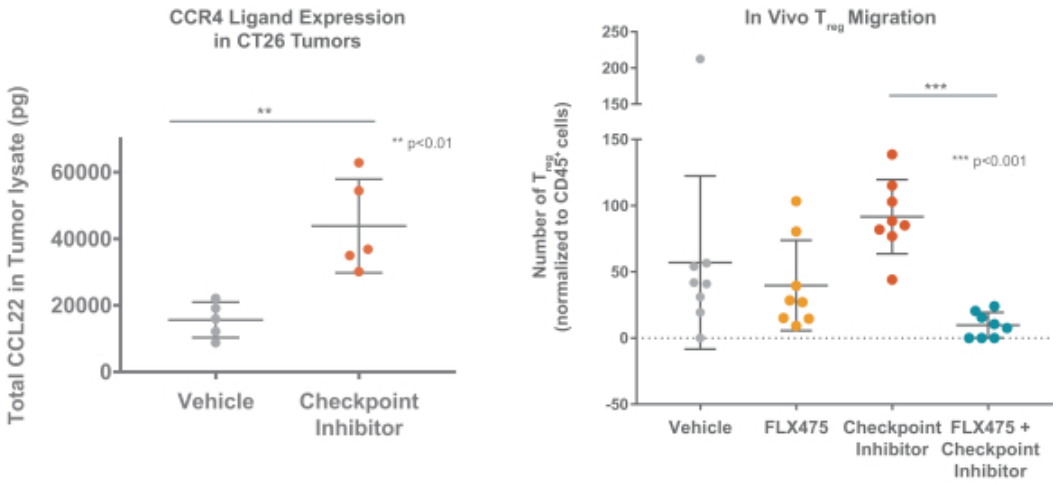
Accumulation of T_{reg} in the TME is a General Adaptive Immune Resistance Mechanism to Treatment



Accumulation of T_{reg} has also been observed in both post anti-PD-1 and after conventional therapies such as radiation or chemotherapy

To mimic this in a preclinical tumor model, we evaluated FLX475 in a mouse tumor model that does not express high levels of CCR4 ligands, exemplified by the CT26 mouse tumor model. We observed in four independent experiments with five mice per experimental arm that the treatment with checkpoint inhibitors led to a statistically significant ($p < 0.05$) increase in the expression of CCR4 ligands with an average increase of 2.9 fold over vehicle control and a range from 1.6 to 4.3 fold. In two independent experiments with eight mice per treatment cohort we observed a 1.6-fold (range 0.8 to 2.4) increase in the number of T_{reg} that infiltrate the tumor, recapitulating the clinical observations mentioned above. We believe that the increase in the infiltration of T_{reg} upon treatment with the checkpoint inhibitor is representative of one mechanism of resistance seen in patients treated with these inhibitors. Importantly, in these two independent experiments with eight mice per experimental arm we observed that the addition of FLX475 to the checkpoint inhibitor reduced the number of T_{reg} migrating into the TME in a statistically significant manner.

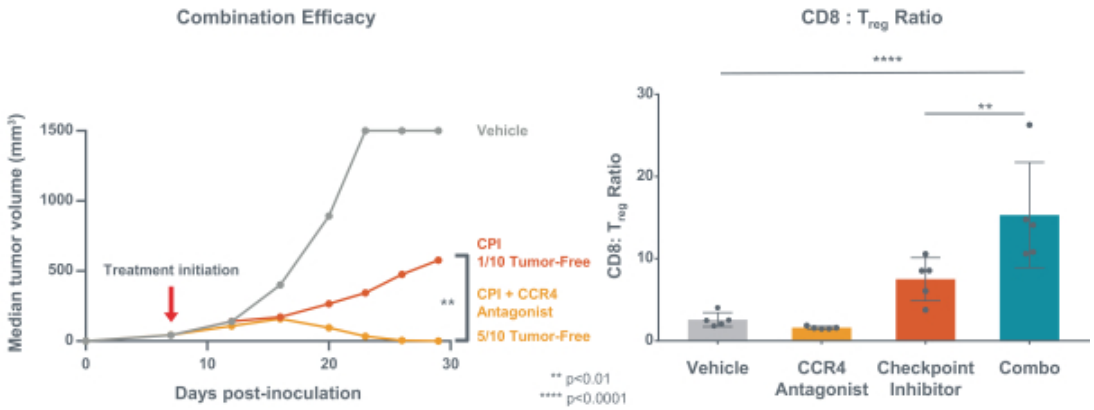
FLX475 Inhibition of T_{reg} Migration Following Checkpoint Inhibitor Treatment in a Mouse Model of a Non-"Charged" Tumor



Antitumor Activity of the Combination of a CCR4 Antagonist and Checkpoint Inhibitor in a Mouse Tumor Model

The antitumor activity of a CCR4 antagonist closely related to FLX475 in combination with an immune checkpoint inhibitor was evaluated in the CT26 mouse tumor model in five independent experiments with ten mice per experimental cohort. Single agent activity of an immune checkpoint inhibitor results in modest antitumor activity and almost no cures. However, the combination of a CCR4 antagonist and an immune checkpoint inhibitor resulted in statistically significant ($p < 0.05$) synergistic antitumor activity with 50% of all mice showing complete tumor regression in the experiment shown. In multiple experiments, an average of 39% experienced tumor regression (0%-70% across studies). Mice treated with the combination approach were completely resistant to rechallenge with the same tumor, confirming that the antitumor effect observed during the treatment phase was immune-mediated and associated with long-term immune memory. The combination of inhibition of T_{reg} by a CCR4 antagonist with an immune checkpoint inhibitor in three independent experiments with eight mice per experimental cohort demonstrated an increase in the ratio of $CD8^+$ effector T cells to T_{reg}. Previous studies have shown that this ratio is an indicator of prognosis in many cancers. Patients with low effector T cell to T_{reg} ratios have worse prognoses in cancers that include ovarian cancer, pancreatic cancer, lung cancer, glioblastoma, NHL and melanoma. We believe that the ability of a CCR4 antagonist to increase this ratio and provide therapeutic benefit will not be limited to a few select cancers, but may have broad implications across many tumor types. The ability of a CCR4 antagonist to prevent T_{reg} migration suggests that combining FLX475 with a checkpoint inhibitor may provide highly effective antitumor activity by potentially deepening or broadening responses compared to checkpoint inhibitor alone.

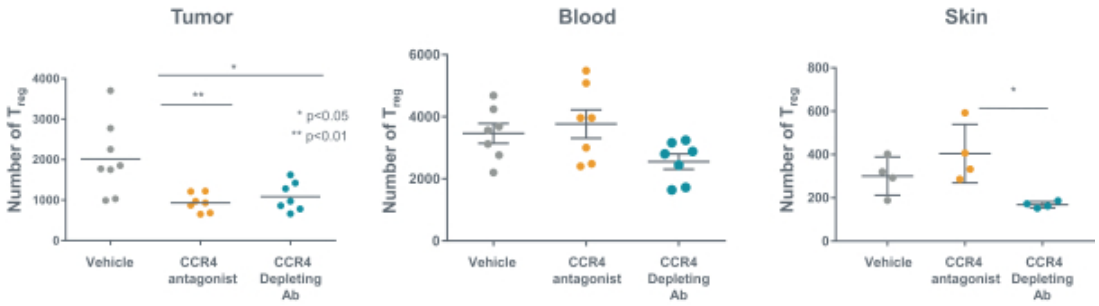
Antitumor Activity of Our CCR4 Antagonist and Checkpoint Inhibitor in Combination in a Mouse Tumor Model



Our CCR4 Antagonist Selectively Inhibits T_{reg} Migration into Tumors but not Healthy Tissues

The impact of CCR4 inhibition by a CCR4 antagonist was compared to a depleting CCR4 antibody on T_{reg} migration into the tumor and healthy tissue in a mouse tumor model, which included two independent experiments with seven mice per experimental arm. Mice with established tumors were dosed with either our CCR4 antagonist or a depleting CCR4 antibody, then injected with fluorescently labeled T_{reg} to assess the level of T_{reg} migration into the tumor and healthy tissues. Both our CCR4 antagonist and the antibody led to statistically significant ($p<0.05$) reductions in T_{reg} that were able to infiltrate the tumor compared to untreated controls. However, in contrast to the antibody, our CCR4 antagonist did not result in depletion or inhibition of migration of T_{reg} in the blood or skin (demonstrated in two separate experiments). We believe that the tumor-selective activity of our FLX475 will enable reductions in tumor T_{reg} with a decreased likelihood of deleterious adverse events that may result from systemic depletion of all T_{reg}.

Our CCR4 Antagonist Selectively Inhibits T_{reg} Migration into Tumors but Not Healthy Tissues



FLX475: Clinical Trials

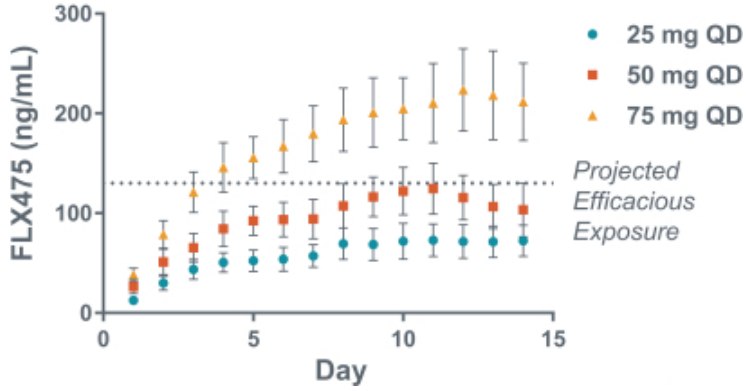
FLX475-01: A Phase 1 Clinical Trial of FLX475 in Healthy Volunteers

We completed a placebo-controlled, double-blind dose-escalation Phase 1 clinical trial of FLX475 in 104 healthy volunteers. We designed and conducted the healthy volunteer study in order to (i) rapidly generate PK and receptor occupancy data that allow us to identify a therapeutic dose, (ii) corroborate in humans our observed favorable preclinical safety profile and (iii) potentially allow us to accelerate the dose-escalation

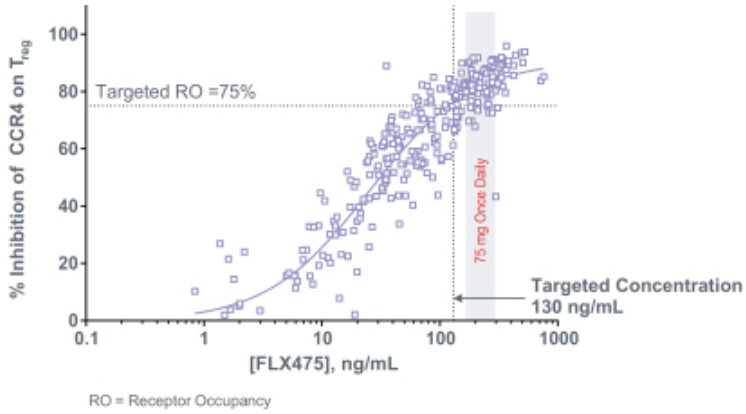
portion of our Phase 1/2 oncology study and drive efficiencies in our clinical development going forward. FLX475 was well tolerated and demonstrated dose-dependent inhibition of CCR4 with no observed immune-related adverse events or significant clinical adverse events.

Oral dosing of FLX475 led to linear PK and a clear dose-related inhibition of CCR4 with low subject-to-subject variability. Based on analysis of the multiple dose data, at the 75 mg once-daily dose, 75% receptor occupancy was achieved in six out of six healthy volunteers, which, in our preclinical studies, corresponded with 90% inhibition of in vitro T_{reg} migration and the highest level of inhibition of in vivo T_{reg} migration and antitumor activity.

FLX475: Favorable Exposure in Healthy Volunteer Study



CCR4 Target Coverage Exceeded at 75 mg Once Daily Dosing with FLX475



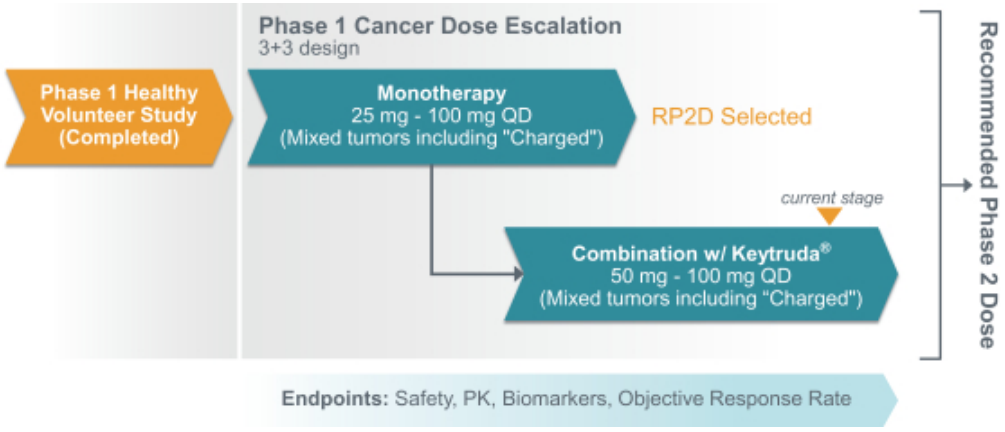
FLX475 was well tolerated, with no significant lab abnormalities, serious adverse events or dose-limiting clinical adverse events. There was no evidence of autoimmunity or changes in peripheral blood immune cell populations. Sporadic Grade 1 corrected Q-T interval (“QTc”) prolongation was observed in nearly every cohort (including placebo). No QTc prolongation greater than Grade 1 was observed in 14-day multiple ascending dose cohort doses through 300/100 mg (300 mg Day 1 loading dose followed by 100 mg once daily), including the projected efficacious dose of 75 mg once daily. At the highest dose (300/150 mg) correlating with exposures three to five times that needed to achieve efficacious exposure, two subjects (out of six dosed with FLX475) met QTc stopping criteria (greater than 60 msec prolongation from baseline, one of whom also exhibited a transient Grade 2 QTc prolongation), which were asymptomatic and not associated with arrhythmia or any other adverse event.

FLX475-02: A Phase 1/2 Dose Escalation and Expansion Study of FLX475 Alone and in Combination with Pembrolizumab in Advanced Cancer

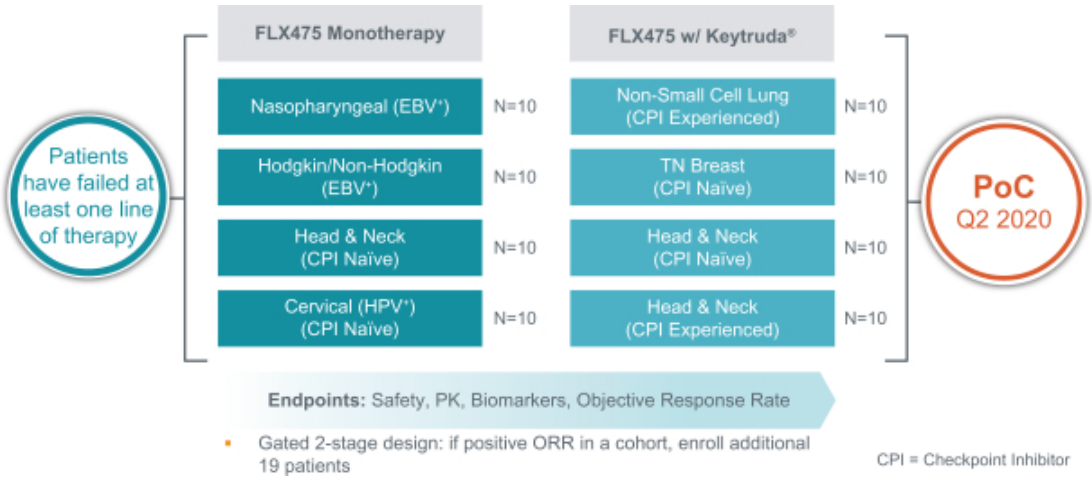
We are currently conducting a Phase 1/2 clinical trial of FLX475 as monotherapy and in combination with pembrolizumab in patients with EBV or HPV and other "charged" tumors. We have completed Phase 1 dose escalation of FLX475 monotherapy and are currently enrolling the Phase 2 monotherapy expansion cohorts at a daily dose of 100 mg. While one dose-limiting clinical adverse event of asymptomatic QTc prolongation (> 500 ms and > 60 ms prolongation from baseline) has been observed in each of the Phase 1 75 mg and 100 mg monotherapy cohorts, both in subjects with confounding factors (including an elevated and increasing QTc at baseline in one, and hypokalemia in the other), no monotherapy maximum tolerated dose ("MTD") was defined as no dose was determined to have exceeded the MTD. In the Phase 1 combination part of the study, as previously reported, a patient with NSCLC in the 50 mg FLX475 and pembrolizumab cohort that had failed prior treatment with anti-PD-L1 therapy (atezolizumab) has had a confirmed PR under RECIST 1.1 criteria, based on radiological analysis performed at the clinical investigator site, with a 37.5% reduction in target lesion measurement at 8 weeks and a 47% reduction at 14 weeks. The patient remains on study and in response, and has been able to escalate his dose to 75 mg. In February 2020 we opened for enrollment the Phase 2 combination therapy expansion cohorts at a daily dose of 100 mg and intend to provide an initial data readout from the Phase 1/2 trial in the second quarter of 2020. For more information regarding the risks associated with our Phase 1/2 clinical trial for FLX475, please see "Risk Factors—Risks Related to Our Business—FLX475 and RPT193 are in clinical development, which may fail or suffer delays that materially and adversely affect their commercial viability."

In the first stage of the Phase 2 part of this trial, eight cohorts of ten patients each, grouped by indication will be dosed with FLX475 as monotherapy or in combination with pembrolizumab. In the four Phase 2 monotherapy expansion cohorts patients will either have NPC or lymphoma confirmed to be EBV+, cervical cancer that is HPV+ or HNSCC that is naïve to checkpoint therapy. In the four Phase 2 combination expansion cohorts, patients will be NSCLC or HNSCC patients who are relapsed or refractory to checkpoint inhibitors or TNBC or HNSCC patients naïve to checkpoint inhibitors. We anticipate obtaining data on overall response rates in the Phase 2 part of this trial throughout 2020. Cohorts in which promising activity is observed will then proceed into Stage 2, enrolling an additional 19 patients.

FLX475 Phase 1 Dose Escalation



FLX475 Phase 2 Trial: Path to PoC



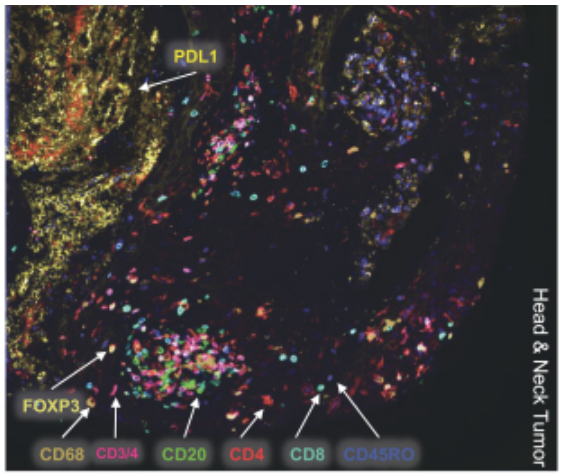
Gated 2-stage design:

- First stage enrollment (10 patients/cohort)
- Second stage: if positive ORR in a cohort, enroll additional 19 patients

Accumulating results from the FLX475-02 Phase 1/2 study will inform available clinical development options that can be leveraged in near real time. For example, if we observe promising clinical data with FLX475 monotherapy in a specific Phase 2 expansion cohort (such as a high overall response rate), we could then initiate planning for a potential pivotal trial. Examples of such a trial include a single-arm study in a patient population with high unmet need (e.g. either a single disease, or "basket" of virally-associated tumors, with no available standard therapy options), and in a randomized trial against standard therapy(ies). Similarly, data from a particular Phase 2 combination expansion cohort could be considered promising enough to plan for a randomized Phase 2 or 3 study comparing FLX475/pembrolizumab combination therapy against pembrolizumab alone. Based on historical examples, it may be possible to modify the current Phase 1/2 trial to seamlessly proceed into one or more pivotal trials, thus saving significant clinical development time to potential regulatory submission and approval.

In addition, biomarker data obtained from the patients in the ongoing Phase 1/2 trial may inform the generation of a companion diagnostic that could potentially be used to prospectively select for patients who may be more likely to respond to FLX475 therapy in a future study, thus increasing the chances of a positive trial result and regulatory approval. Our comprehensive biomarker plan includes analysis of the TME in paired biopsies collected before and on treatment. Key biomarkers include (i) CD8 : T_{reg} ratio as detected by immunohistochemistry, (ii) expression of CCL17 and CCL22 as detected by in situ hybridization (iii) receptor occupancy, (iv) peripheral blood analysis for CCL17 and CCL22 and (v) exploratory analysis, including immune phenotyping, transcriptomics and T cell clonality. An example of the multiplexed immunohistochemistry analysis of the TME derived from a commercially-available tumor sample is shown in the figure below. For more information regarding the risks associated with our Phase 1/2 clinical trial for FLX475, please see "Risk Factors—Risks Related to Our Business."

Multiplexed Immunohistochemistry Analysis of the TME



Multiplexed Immunofluorescence

Our Lead Inflammation Drug Candidate—RPT193

Our lead inflammation drug candidate, RPT193, selectively inhibits the migration of Th2 cells into allergically-inflamed tissues. Th2 cells are clinically validated drivers of allergic diseases such as AD, asthma, chronic urticaria, allergic conjunctivitis, chronic rhinosinusitis and eosinophilic esophagitis. The current standard of care for AD, the first indication for which we are pursuing clinical development, includes topical creams and steroids as well as the injectable biologic, dupilumab. Dupilumab was approved for moderate to severe AD in 2017 as well as in moderate to severe asthma in late 2018, achieving $922 million of worldwide net sales in 2018. Despite recent progress in the treatment of inflammatory diseases, including AD, we believe there remains a significant unmet need for a safe, oral treatment with an attractive efficacy profile.

We believe based on our preclinical pharmacology and GLP toxicology results, if confirmed in clinical trials, combined with the convenience of once-daily oral dosing, RPT193, if approved by the FDA, could fill an unmet medical need for treatment of allergic disorders. We initiated a first-in-human trial in August 2019 we refer to as “seamless” given that it starts with healthy volunteers and then transitions directly into a cohort of patients with AD. In January 2020, we have completed the initial Phase 1a single and multiple dose escalation cohorts of healthy volunteers and the blinded safety, pharmacokinetic, and pharmacodynamic data from this Phase 1a portion of the trial have demonstrated the ability to achieve target drug levels and receptor occupancy with an acceptable safety profile using once-daily dosing of RPT193 in healthy volunteers. We expect to initiate the Phase 1b portion of the trial in AD patients in February 2020 and we anticipate reporting PoC results from this trial in the third quarter of 2020. Thereafter, we intend to expand clinical development into additional Th2-driven allergic diseases.

RPT193 is chemically distinct from FLX475, our CCR4 antagonist for oncology, and has demonstrated a unique pharmaceutical profile in preclinical experiments, that we believe will be favorable for use in non-oncology indications. Our data have shown that RPT193 has a lower PK parameter known as the volume of distribution relative to that of FLX475. Compounds with a lower volume of distribution, such as RPT193, are more likely to spare key organ systems from extensive drug exposure. Limited tissue exposure has the potential to contribute to a safety advantage for RPT193. Consistent with this, RPT193 has demonstrated a safety profile both in preclinical studies and in healthy volunteers that suggests it would be well tolerated for chronic dosing in non-oncology indications.

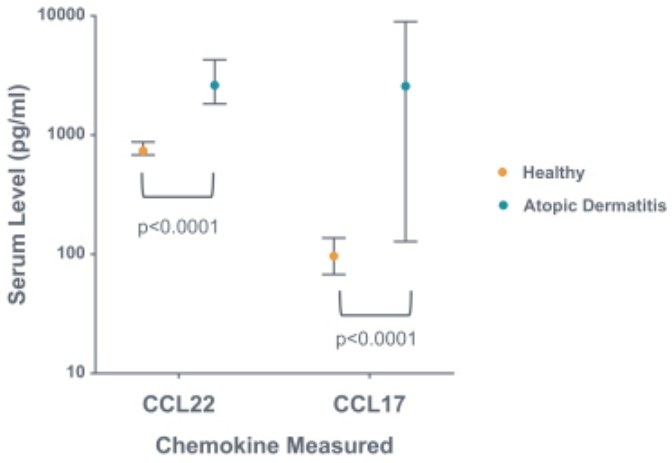
We hold worldwide rights to RPT193 and have submitted patent applications with respect to RPT193 that, if issued, would be scheduled to expire in 2039 (not including any applicable extensions, if approved).

Background—Th2 Cells and Allergic Disease

Th2 cells express high levels of CCR4 and are clinically validated drivers of allergic diseases along the atopic march, which includes AD, asthma, chronic urticaria, allergic conjunctivitis, rhinosinusitis and eosinophilic esophagitis. When a pathogen comes into contact with the skin or mucosal lining of the nose or lungs, an immune response is triggered. It is believed that innate immune cells and antibodies that recognize the pathogen initiate a release of inflammatory cytokines, leading to the recruitment of other immune system components, including Th2 cells. Th2 cells secrete inflammatory cytokines, such as interleukin 4 ("IL-4"), interleukin 5 ("IL-5") and interleukin 13 ("IL-13"). While this Th2 response may be highly effective against foreign pathogens, particularly parasites, sometimes the body overreacts to benign substances in this way, resulting in a significant and presumably unnecessary influx of Th2 cells, leading to conditions along the atopic march.

At a cellular and molecular level, the Th2 response is initiated and sustained when Th2 cells are recruited to the site of inflammation by the binding of CCL17 and CCL22 to CCR4. Patients suffering from AD and other allergic diseases have significantly elevated levels of both CCL17 and CCL22, suggesting that inhibiting the ability of these chemokines to bind to CCR4 may prevent migration of Th2 cells into these inflamed sites, thus reducing inflammation.

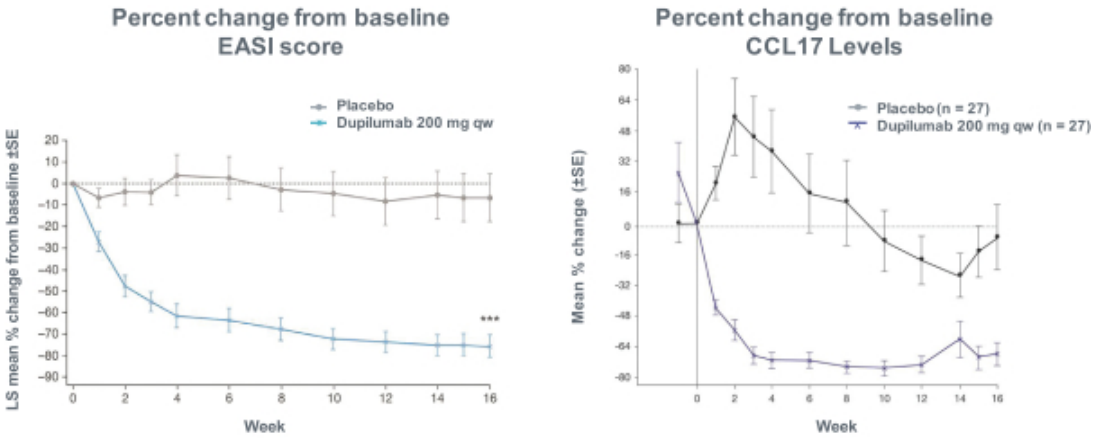
CCR4 Ligands (CCL17 and CCL22) are Significantly Elevated in AD



Thijs et al. Journal of Allergy and Clinical Immunology, 2018, supplemental data

CCL17 and CCL22 levels have been found to strongly correlate with the severity of many allergic diseases, including AD. Dupilumab works by blocking the receptor for IL-4 and IL-13, two of the cytokines produced by Th2 cells, leading to a reduction in the level of inflammation. Dupilumab also indirectly leads to reductions in the level of CCL17, thus breaking the Th2-driven inflammatory cycle. We believe that inhibition of the CCR4 receptor will block the migration of Th2 cells into these inflammatory sites, leading to reductions in inflammation thereby blocking the secretion of IL-4, IL-5 and IL-13 before they can induce tissue damage.

CCL17 Is a Good Marker for Response to AD Therapy (Dupilumab)

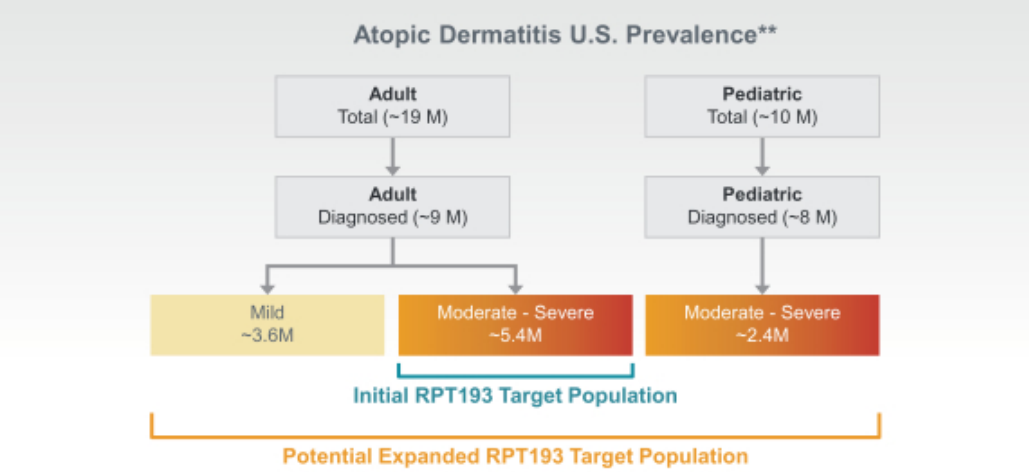


Guttman-Yassky et al. Journal of Allergy and Clinical Immunology, 2019, supplementary figures
EASI = Eczema Area and Severity Index
qw = Weekly dosing

Atopic Dermatitis Overview

AD is a chronic, inflammatory skin disease characterized by skin barrier disruption and immune dysregulation. Patients with AD have chronically inflamed skin lesions that cause, among other disabilities, debilitating pruritus (itch), which can severely impair quality of life. Onset of AD often occurs during childhood and can persist into adulthood. The estimated U.S. adult prevalence of AD is approximately 19 million individuals, of which approximately 50% are diagnosed. An estimated 60% of these adults have disease characterized as moderate to severe. Furthermore, an estimated ten million children have AD, of which approximately 30% experience moderate to severe disease.

Atopic Dermatitis (AD) U.S. Prevalence*



*2018 Data, Decision Resources, national eczema.org, Shaw et al., 2011

AD Historical Standard of Care

Creams, ointments and topical steroids, or other topical or systemic anti-inflammatory agents, are routinely used to manage skin health and reduce skin inflammation in patients with mild to moderate AD. Patients who do not achieve sustained alleviation of symptoms with topical treatments have historically been prescribed systemic steroids or other systemic immunosuppressive agents such as cyclosporine. While these are effective as temporary treatments of flare-ups, extended use has been associated with many potential side effects or adverse events. Systemic steroids, such as prednisone, can lead to temporary symptom relief but their use is not recommended to induce stable remission due to numerous side effects and the propensity of severe disease flares upon treatment cessation. Cyclosporine is also not suitable for long-term use as it has been associated with renal toxicity, hirsutism, nausea and lymphoma, and patients must discontinue use after one to two years.

We believe that topical immunosuppressive agents inadequately address the systemic nature of AD. Furthermore, safety issues associated with systemic immunosuppressants such as steroids and cyclosporine make them inappropriate for chronic administration. The treatment paradigm in AD is evolving given these inadequacies of the historical standard of care agents.

AD Emerging Standard of Care

There are two key recent developments within the AD treatment landscape that will shape the standard of care in the future: (i) the approval of the biologic agent dupilumab for moderate to severe AD in 2017 and

(ii) the clinical progress of the class of oral Janus kinase ("JAK") inhibitors, which are in late stage clinical development and are anticipated to reach the market by 2021.

Dupilumab is a recently approved biologic for AD targeting the Th2 pathway. Dupilumab prevents T cell activation and amplification of proinflammatory signaling pathways by blocking the IL-4 receptor alpha, ("IL-4Ra"), preventing IL-4 and IL-13 binding. Approximately 36% of patients receiving weekly or biweekly injections of dupilumab achieved significant improvement in disease symptoms. Dupilumab was approved for moderate to severe AD in the United States in March 2017 and in Europe in September 2017. Net sales of dupilumab were $257 million in 2017 and $922 million in 2018, highlighting the growing demand for safe and effective systemic treatments of AD.

Among the orally administered JAK inhibitors in development for AD, there are three in Phase 3 development: upadacitinib, baricitinib and abrocitinib. JAK inhibitors block the signaling pathway to multiple proinflammatory cytokines, including IL-4 and IL-13, thereby preventing the downstream signaling of Th2 cells at the sites of inflammation. While JAK inhibitors have demonstrated comparable clinical efficacy to that of dupilumab and offer the advantage of oral dosing, these inhibitors are broadly immunosuppressive and therefore may not be suitable for long-term dosing. Additionally, the FDA has placed black box warnings for JAK inhibitors approved in other indications due to the potential for serious infections, malignancies and thromboembolic events.

Despite these recent developments, we believe that there is significant unmet medical need and market potential for a safe and efficacious agent for the treatment of AD. We believe that preventing the migration of Th2 cells into inflamed tissues with an oral CCR4 antagonist represents a highly differentiated approach. We further believe that an oral agent with a favorable safety and efficacy profile would offer an attractive alternative for patients compared to the biweekly injections associated with dupilumab. While the JAK inhibitor agents are orally administered, they are broadly immunosuppressive and therefore may not be suitable for long-term dosing.

Overview of Other Diseases Along the Atopic March

In addition to AD, a number of allergic diseases are characterized by an inflammatory response to cytokines produced by Th2 cells. These diseases include allergic asthma, chronic urticaria, chronic rhinosinusitis, allergic conjunctivitis and eosinophilic esophagitis.

Asthma

Asthma is a chronic inflammatory disease of the airways characterized by intermittent airway obstruction, swelling and mucus hyperproduction, which can result in coughing, wheezing and difficulty breathing. Allergic asthma is triggered by the inhalation of allergens including dust, pollen and dander. An estimated 25.2 million individuals in the United States have asthma, with allergic asthma as the most common subtype, constituting approximately 80% of asthmatic children and approximately 60% of asthmatic adults. Asthma is driven by both Th2 allergic and Th17 autoimmune mechanisms. An estimated 40% to 50% of patients with asthma fall within the Th2-high subtype characterized by elevated levels of IL-13 and IL-5.

Standard treatment of asthma includes inhaled rapid-acting beta$_2$-agonists for the treatment of acute symptoms and daily low-dose inhaled corticosteroid ("ICS") monotherapy as a first-line maintenance treatment. Anti-immunoglobin E ("Anti-IgE") monoclonal antibody omalizumab and IL-4Ra antagonist dupilumab can be prescribed for individuals with asthma who are uncontrolled on ICS therapy. While these therapies are generally effective, they are administered via injection and their targets are downstream of CCR4, presenting a market opportunity for an oral, upstream alternative.

Chronic Urticaria

Chronic urticarias ("CUs") are a group of skin conditions including chronic spontaneous urticaria ("CSU"), cholinergic urticaria ("CLU") and symptomatic dermographism that are characterized by hives, redness, itching and swelling, lasting for greater than six weeks. The trigger for CSU is unknown; however, CLU is triggered by increases in body temperature and symptomatic dermographism by physical contact with the skin by exogenous mechanical stimuli. Symptoms result from the degranulation of dermal mast cells, and IgE signaling likely contributes to inappropriate mast cell activation. Urticaria affects 15-20% of the population at some point during their lifetime, with approximately 30% of urticaria patients experiencing recurring episodes.

Current treatment guidelines for CU recommend the use of oral H1-antihistamines as a first-line therapy, with dose escalation of up to four times the standard dose in lower responders. Up to 50% of patients with CSU do not respond to H1-antihistamines and can be prescribed omalizumab, an injected monoclonal antibody, which maintains an approximately 65% response rate as a second-line treatment. Given these response rates from approved biologic drugs, there remains an unmet need for a safe, efficacious therapy with a favorable oral dosing profile. CCL17 and CCL22 are elevated in chronic urticaria, supporting the potential use of RPT193 in this indication.

Chronic Rhinosinusitis

Chronic rhinosinusitis ("CRS") is a disease characterized by sinonasal mucosal inflammation, which results in facial pain/pressure, nasal drainage, nasal obstruction and reduction or loss of smell, for at least 8-12 consecutive weeks. Confirmation of the disease is required using an objective measure such as a nasal endoscopy or CT scan, given lack of symptom specificity. It is believed that approximately 5-15% of the general population experiences CRS, however, the prevalence of doctor-diagnosed CRS was found to be 2-4%. There is wide belief that CRS is a heterogeneous condition and that the causes of inflammation are diverse and multifactorial, involving overlap between both host and environmental triggers.

Standard treatment of CRS utilizes topical and oral steroids, antibiotics and ultimately surgical intervention if symptoms are not adequately controlled by available therapies. IgE antibodies may play a role in CRS, with total IgE levels correlating with disease severity, as assessed by CT scan. As a result, anti-IgE antibody omalizumab and anti-IL-5 antibodies reslizumab and mepolizumab have been evaluated as treatment alternatives for CRS, with reslizumab and mepolizumab now considered a recommended treatment for CRS patients with nasal polyps. Dupilumab has also demonstrated activity in CRS in Phase 3 trials. Compared to these widely used injectable biologics, we believe that an orally dosed therapy with comparable safety and efficacy

results would have a competitive profile. Given the activity of the Th2-targeted biologics, we believe that RPT193 represents a potential oral treatment for this indication.

Allergic Conjunctivitis

Allergic conjunctivitis is an ocular disease in which the conjunctiva—the transparent tissue lining the eyelid and covering the white part of the eye—is inflamed as a result of exposure to allergens. Simple allergic conjunctivitis, vernal keratoconjunctivitis, atopic keratoconjunctivitis and giant papillary conjunctivitis are the four main types of allergic conjunctivitis. These different manifestations of conjunctivitis differ in their affected population and etiology. The majority of conjunctivitis patients have simple allergic conjunctivitis and this predominantly affects patients who are younger than 20 years old. Diagnosis is difficult to estimate given that patients often fail to report symptoms and do not seek medical attention, but it is estimated that between 10-30% of the general population suffers from this inflammation of the eye. In fact, more than 60% of individuals suffering from allergies are believed to have allergic conjunctivitis.

The current treatment paradigm for severe forms of simple allergic conjunctivitis has a combination of antihistamine and mast cell-stabilizing drops as the first-line of treatment. The second-line treatment is providing patients with topical nonsteroidal anti-inflammatory drops. Refractory patients are given corticosteroid drops for no more than two weeks, and clinicians may also opt to give patients systemic antihistamines. We believe there is an unmet need in the tolerability and safety profiles of patients with severe refractory cases of simple allergic conjunctivitis given the adverse events resulting from the long-term use of corticosteroids and antihistamines. CCL17 and CCL22 are elevated in allergic conjunctivitis, supporting the potential use of RPT193 in this indication.

Eosinophilic Esophagitis

Eosinophilic esophagitis is a chronic, allergic inflammatory disease of the esophagus. It is estimated that eosinophilic esophagitis affects at least 150,000 people in the United States. Studies from Western Europe, Australia and North America estimate prevalence to be 50-100 cases per 100,000 persons. Eosinophilic esophagitis is caused by the presence of a large number of eosinophils in the esophagus, which stems from many factors such as immune hypersensitivity, environmental proteins and genetics.

Standard treatment for eosinophilic esophagitis includes diet modification, esophageal dilation and drugs with topical corticosteroids as a first-line medication. It is estimated that there is at least a partial symptomatic response seen in 60% to 75% of adults with eosinophilic esophagitis who take topical steroids. While steroids offer symptomatic relief once treated, patients are required to continue maintenance regimens as disease recurrence is common after discontinuation of treatment. Dupilumab has demonstrated activity in eosinophilic esophagitis in clinical trials, supporting the potential use of RPT193 in this indication.

Our Allergic Disease Solution: RPT193

While there are marketed injectable biologics, as well as oral drug candidates and injectable biologics in clinical development, we believe there is an unmet need in the treatment landscape for a safe and efficacious oral therapy for the long-term treatment of AD.

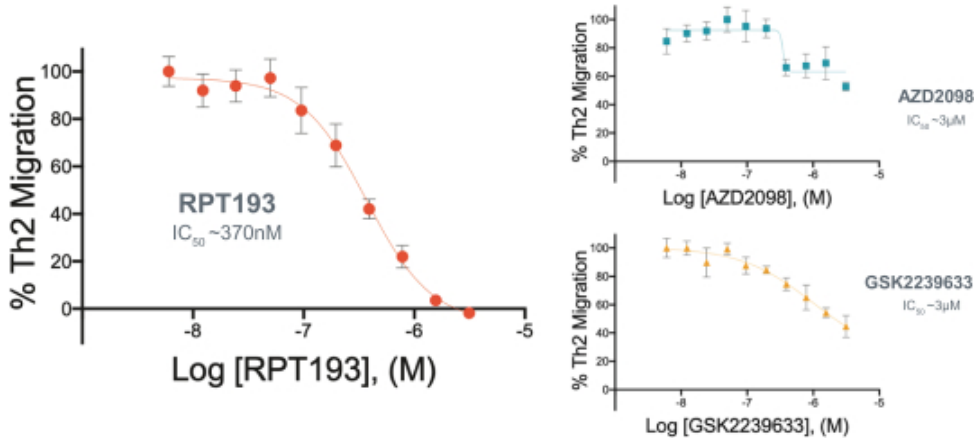
	RPT193	Dupilumab*	JAK inhibitors
Safety	Preclinical and healthy volunteer data suggest a favorable safety profile	Generally safe and well tolerated Conjunctivitis	Immunosuppressive Potential black box warning for infections, malignancies and thromboembolic events
Route of Administration	Oral, daily dosing	Injectable	Oral
Efficacy	Preclinical data suggest efficacy similar to dupilumab*	Durable clinical efficacy Activity in AD and asthma	Similar to dupilumab*

* DUPIXENT®

Favorable Characteristic
Unfavorable Characteristic

RPT193 is an oral, small molecule CCR4 antagonist designed to block the migration of inflammatory Th2 cells into allergically inflamed tissues. In an in vitro chemotaxis assay, RPT193 was shown to block CCL22-induced chemotaxis of human Th2 cells with an IC_{50} of ~370 nM. For comparison, two CCR4 antagonists from the published literature, AZD2098 and GSK2239633, both exhibited chemotaxis IC_{50} of >3µM when assayed head to head in the same in vitro experiment.

CCL22-Induced Th2 Chemotaxis



In preclinical studies, oral administration of RPT193 resulted consistently in statistically significant ($p < 0.05$) reduction of inflammation in allergic skin (nine out of nine experiments) and airway inflammation models (two out of two experiments). We believe based on our preclinical pharmacology and GLP toxicology results, if confirmed in clinical trials, combined with the convenience of once daily oral dosing, RPT193 could fill an unmet medical need for the treatment of allergic disorders.

RPT193 Preclinical Data

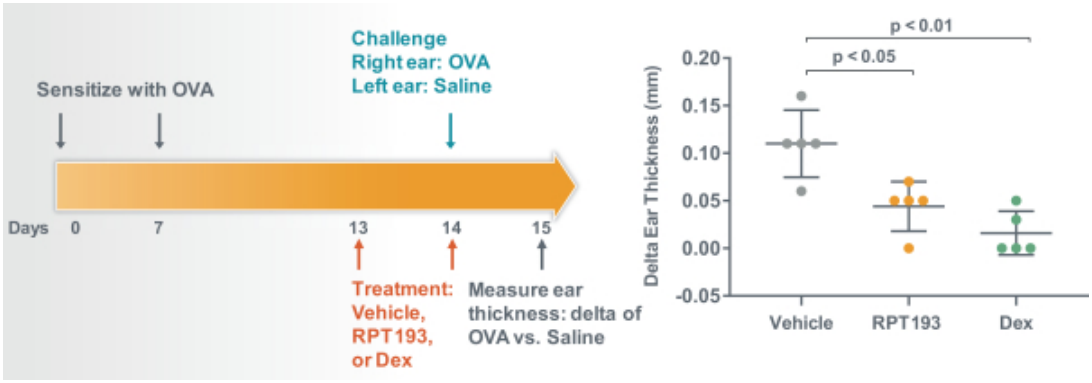
RPT193 has demonstrated the ability to block the migration of mouse and human Th2 cells in vitro and in vivo and has demonstrated activity in multiple preclinical mouse models of AD and asthma. The observed activity in preclinical mouse models was similar to that of a commercially available anti-mouse IL-13 and anti-IL-4 receptor antibodies, which we believe is representative of the class of biologics such as lebrikizumab, dupilumab and others targeting Th2-derived cytokines such as IL-4 and IL-13. We believe that the results observed in these models, individually and in the aggregate, demonstrate the clinical potential to treat a number of Th2-driven diseases along the atopic march in humans.

RPT193 Activity in Preclinical Model of AD

In a mouse model of AD, repeated systemic sensitization to ovalbumin ("OVA") induces a Th2 response leading to increased expression of Th2 cytokines IL-4, IL-5 and IL-13 in the allergen-exposed skin. This leads to broad inflammation, deposition of collagen and skin thickening. Oral treatment of RPT193 in mice that have been sensitized to OVA results in a significant decrease in inflammation, as measured by skin thickness of the allergen-challenged ear (two independent experiments with five mice per experimental arm). The treatment effect with RPT193 was comparable to the systemic treatment with the corticosteroid dexamethasone ("Dex") which is used as a positive control in these models.

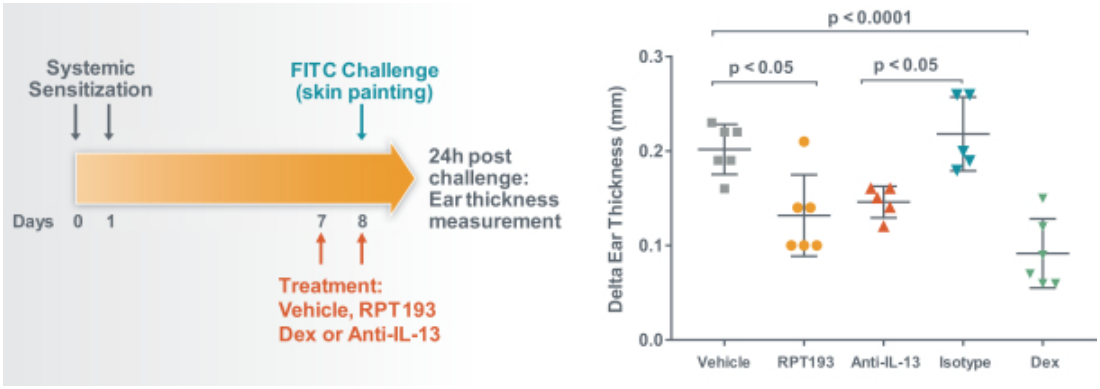
The figure below shows the experimental outline and results as measured by the change in ("delta") ear thickness, determined by the difference in ear thickness between the challenged ear and the unchallenged control ear.

RPT193 Reduces Skin Inflammation in an OVA-Induced AD Model



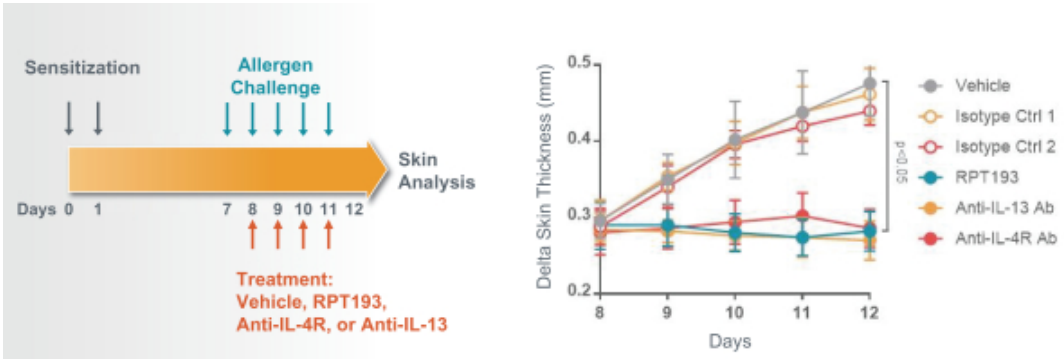
The activity observed with RPT193 was not only seen in the OVA-AD model, but was also seen in an alternative allergen-induced model of AD. In this model, five mice per experimental arm are sensitized using fluorescein isothiocyanate ("FITC"), which induces a strong Th2 cell-mediated response. Sensitized mice are then challenged on the ear with FITC, which leads to inflammation resulting in swelling and is easily measured as ear thickness. In six of six independent experiments, we observed that mice treated with RPT193 one day prior to FITC challenge had a significant reduction in thickness ($p < 0.05$ with average reduction ranging from 20% to 42% compared to vehicle group). In a head-to-head experiment in this preclinical mouse model, oral RPT193 showed similar activity to a neutralizing anti-IL-13 antibody ("anti-IL13").

RPT193 Reduces Skin Inflammation in a FITC-Induced AD Model



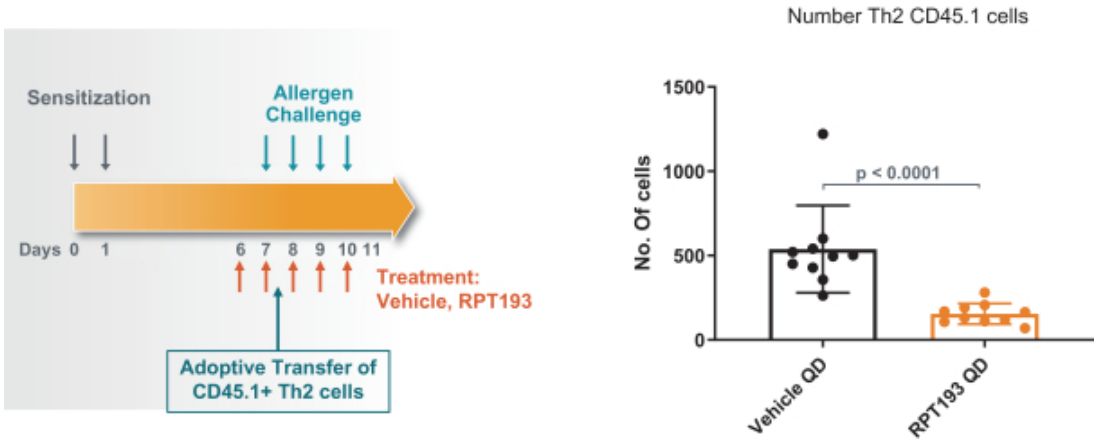
The treatment effect with RPT193 was also observed in a therapeutic model of the Th2-driven FITC AD model. In contrast to the model described above, five to ten mice per experimental arm received treatment 24 hours following the allergen challenge when significant ear inflammation was already observed. Oral administration of RPT193 in three of three independent experiments resulted in a statistically significant reduction in ear thickness compared to treatment control ($p < 0.05$ with average reduction ranging from 42% to 54%). When comparing to the respective vehicle or isotype control, RPT193, anti-IL-13 antibody and an anti-IL-4R antibody had similar effects (RPT193 vs. anti-IL-13: 45% vs. 46%, 54% vs. 40% and 42% vs. 28% reduction in ear thickness at Day 12 in the three separate experiments; RPT193 vs. anti-IL-4R: 37% vs 49%, 30% vs. 30% and 41% vs. 41% reduction in ear thickness at Day 12 in the three separate experiments). Therefore, the treatment effect of once daily dosing of RPT193 was comparable to that observed with the systemic administration anti-IL-13 and anti-IL-4R antibodies.

RPT193 Reduces Skin Inflammation in a Therapeutic Th2-Driven AD Model



Once-daily oral administration of RPT193 also resulted in a statistically significant reduction of Th2 cell migration in the inflamed skin tissue in vivo ($p < 0.0001$). Ten mice per group received either vehicle control or once daily oral administration of RPT193. In vitro differentiated mouse Th2 cells were adoptively transferred on day 7 following the first allergen challenge at which time significant ear inflammation was observed. Mice received four additional allergen challenges before immune cells were isolated from the skin. The Th2 cells that migrated into the inflamed tissue were enumerated by using a marker that is only present on the adoptively transferred Th2 cells.

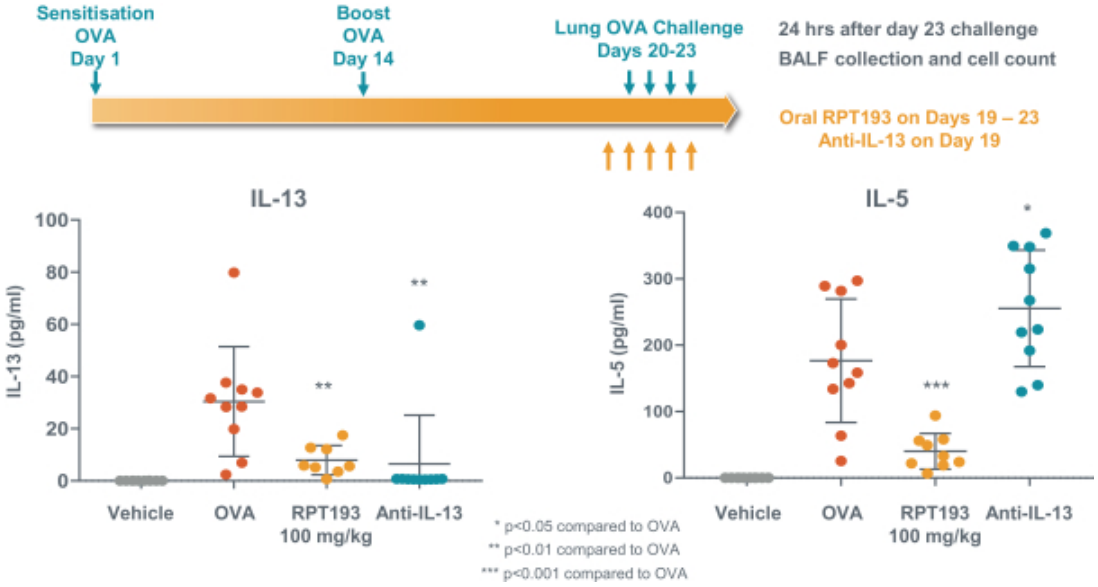
RPT193 Reduces Migration of Th2 cells in Atopic Dermatitis Model



RPT193 Efficacy in a Preclinical Model of Allergic Asthma

In a mouse model of allergic asthma induced by the allergen OVA, treatment with RPT193 in two independent experiments with ten mice per experimental arm significantly reduced immune cell migration into the lungs and Th2-derived cytokines such as IL-5 and IL-13, which are drivers of the disease as determined by analysis of fluid collected by washing a small portion of the lung. This fluid, called bronchoalveolar lavage fluid ("BALF"), was found to contain dose-dependent decreases in both IL-5 and IL-13. Not unexpectedly, anti-IL-13 had no effect on levels of IL-5 in the BALF. The reduction of the cellular infiltrate and the level of Th2-derived cytokines in the BALF supports the hypothesis that RPT193 was effective in reducing migration of Th2 cells into the lungs as evidenced by lowered overall allergic inflammation.

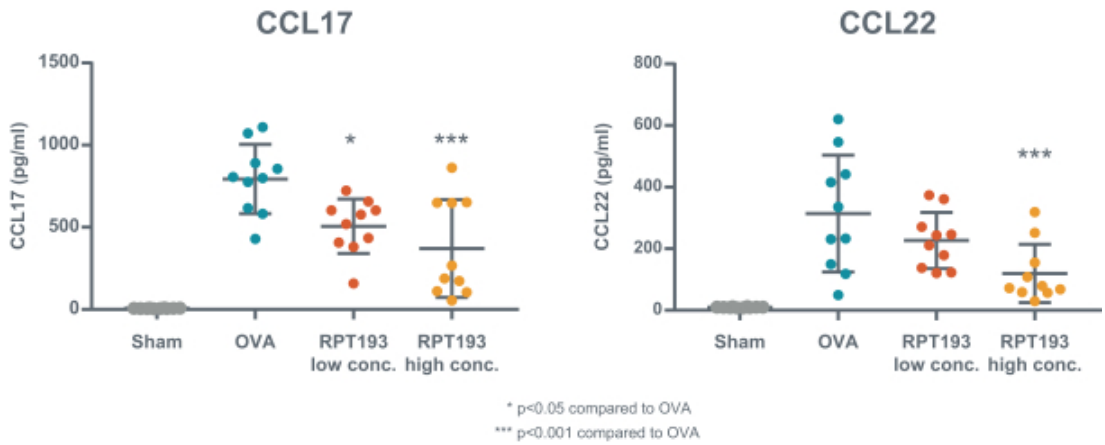
RPT193 Shows Evidence of Broader Activity than Anti-IL-13



RPT193 Reduces Levels of CCL17 and CCL22 in the BALF in a Preclinical Model of Allergic Asthma

In this OVA model of allergic asthma, treatment with RPT193 in two of two independent experiments with ten mice per experimental arm also led to statistically significant decreases in the levels of CCL17 and CCL22 ($p<0.05$ at high dose of RPT193, 24 hours after challenge), chemokines that are secreted by inflamed cells that serve to recruit Th2 cells. This observation suggests that RPT193 is not only able to directly block Th2 cell recruitment, but that by doing so, the level of overall inflammation is decreased, reducing the secretion of these cytokines and the further recruitment of Th2 cells. Reduction of the CCR4 ligands, CCL17 and CCL22, has also been observed in patients treated with other Th2-targeting approaches, such as dupilumab, demonstrating the clinical relevance of our preclinical findings with RPT193.

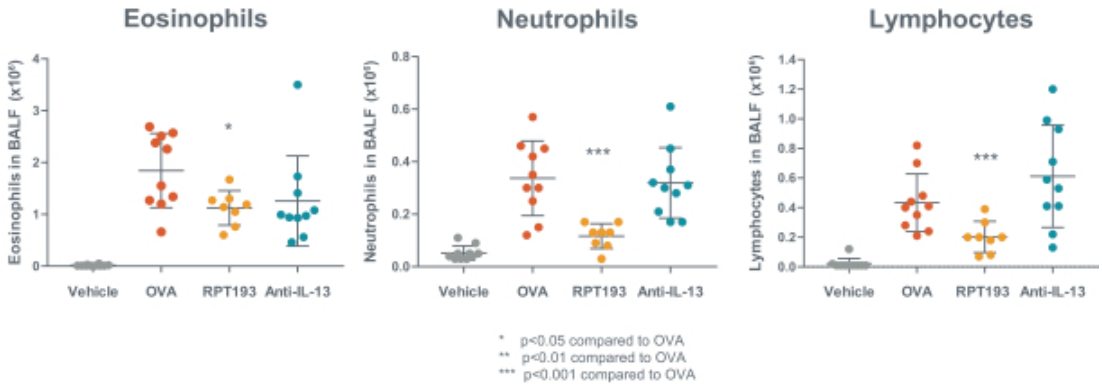
RPT193 Reduces CCR4 Ligands in the BALF



RPT193 Reduces the Immune Cell Infiltrate in the BALF in a Preclinical Model of Allergic Asthma

Treatment of mice in an allergic asthma model with RPT193 in two independent experiments with ten mice per experimental cohort led to reduction in multiple classes of immune cells in the BALF, including eosinophils, neutrophils and lymphocytes. These reductions are all consistent with the broad anti-inflammatory action that RPT193 can induce by blocking Th2 cell migration. This prevents one of the earliest steps in the inflammatory cascade resulting in profound effects on multiple downstream components of the immune system and inflammatory response. The reduction of eosinophils in the BALF was comparable to the anti-IL-13 antibody. However, deeper reduction in neutrophil and lymphocyte counts were observed with RPT193, suggesting a potentially greater impact on the disease compared to other Th2-targeting approaches.

RPT193 Shows Evidence of Broader Activity than Anti-IL-13:
Neutrophil and Lymphocytic Infiltration



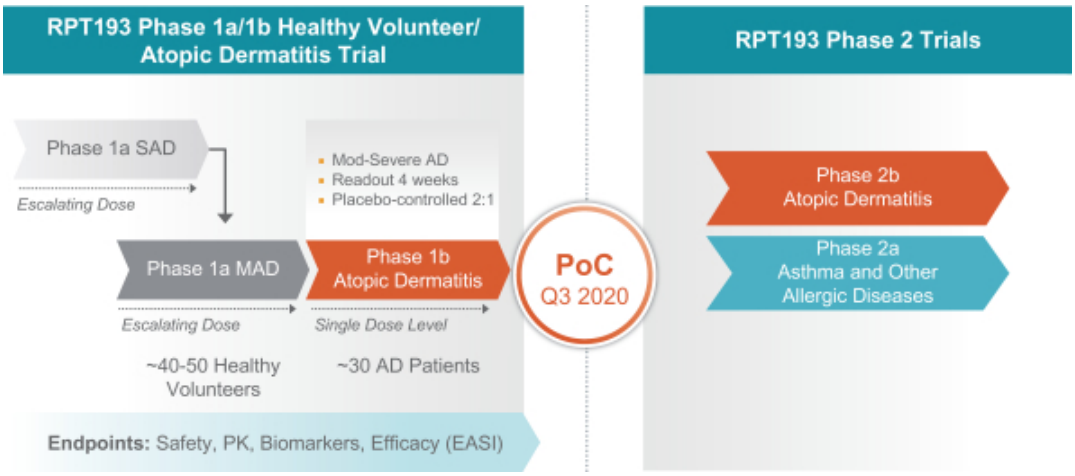
In addition, we believe the overall activity of RPT193 in this OVA-induced asthma model if confirmed in clinical trials and approved by the FDA could fill an unmet medical need for the treatment of allergic disorders. We believe that the ability to achieve this level of activity with an orally available therapy, if confirmed in clinical trials, would represent a significant advantage over biologics, which require regular injections.

RPT193: Clinical Trials

We initiated a first-in-human trial in August 2019 we refer to as "seamless" given that it starts with healthy volunteers and then transitions directly into a cohort of patients with AD. In January 2020, we completed the initial Phase 1a single and multiple dose escalation ("SAD/MAD") cohorts of healthy volunteers and the blinded safety, pharmacokinetic, and pharmacodynamic data from this Phase 1a portion of the trial have demonstrated the ability to achieve target drug levels and receptor occupancy with an acceptable safety profile using once-daily dosing of RPT193 in healthy volunteers. We expect to initiate the Phase 1b portion of the trial in AD patients in February 2020 and we anticipate reporting PoC results from this trial in the third quarter of 2020. Thereafter, we intend to expand clinical development into additional Th2-driven allergic indications.

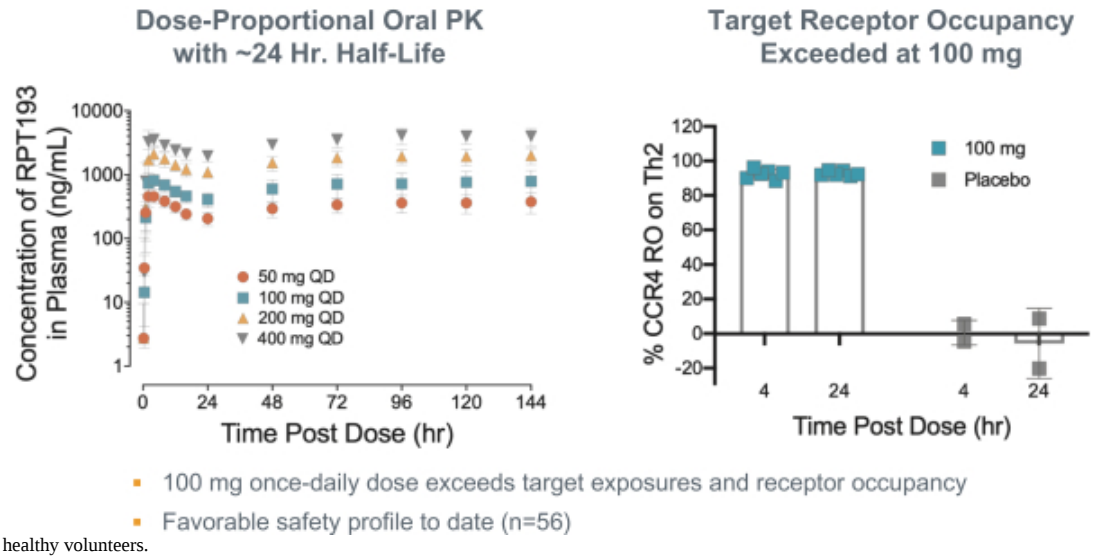
The following graphic outlines the design for our proposed Phase 1a/1b trial and proposed Phase 2a/2b trials.

RPT193: Seamless Clinical Trial Design to PoC



The following graphic illustrates preliminary MAD pharmacokinetic and SAD pharmacodynamic data from the RPT193 Phase 1a study in healthy volunteers.

Phase 1a HV Data* Supports Once-Daily Dose

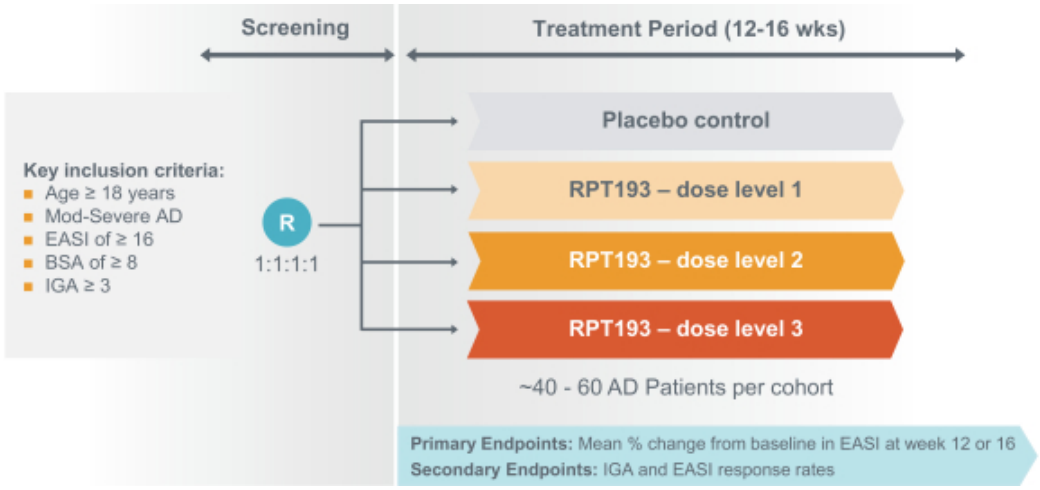


- 100 mg once-daily dose exceeds target exposures and receptor occupancy
- Favorable safety profile to date (n=56)

* Data from 56 dosed healthy volunteers.

The following graphic outlines the design of our proposed Phase 2b trial in AD to be conducted subsequent to the successful completion of the Phase 1a/1b trial.

RPT193: Future Phase 2b Double-Blind, Placebo-Controlled Trial for AD



BSA = Body Surface Area
IGA = Investigator Global Assessment

Our RPT-GCN2i Program

We are developing a small molecule inhibitor of GCN2 as an agent targeting the dysregulated metabolism in the TME that results in immune suppression and consequently in tumor progression. We believe this target has been validated by our proprietary drug discovery and development engine and that inhibition of GCN2 can lead to direct antitumor effects by addressing altered metabolic pathways in tumors as well as relieving the immunosuppressive effects exerted by the TME through nutrient starvation and other stresses such as hypoxia. Preclinical in vitro and in vivo studies have demonstrated that an RPT-GCN2i has the ability to increase T cell proliferation and function in nutrient-deprived conditions, to overcome MDSC-dependent immune suppression, to decrease tumor growth in vitro and to generate antitumor responses in animal tumor models. We are developing an RPT-GCN2i with the intent of selecting a preclinical candidate in 2020.

Role of GCN2 in Tumor Cell Proliferation and Immunosuppression

GCN2, or general control nonderepressible 2, is a stress response kinase that regulates the immune system and survival of tumor cells in the TME. Due to the aberrant vasculature of the tumor, the limited blood supply results in a lack of oxygen and deprivation of nutrients, including amino acids. Activation of the GCN2 pathway has been demonstrated in human tumors and importantly, deficiency in GCN2 limits tumor growth in preclinical tumor models. Activation of T cells is highly dependent on the availability of amino acids and other nutrients. GCN2 is a key cellular sensor in T cells for amino acid and glucose starvation. Low levels of amino acids such as tryptophan, arginine and other amino acids lead to activation of GCN2. This triggers a cascade of cell signaling events in T cells leading to the inhibition of effector cell function and growth. GCN2, through this regulatory pathway, prevents effector cells from mounting an immune response when amino acid levels are in limited supply. Inactivation of GCN2 removes this regulatory block and allows effector cell proliferation and activation even under conditions of amino acid starvation similar to what may exist in tumors.

Our Solution, RPT-GCN2i

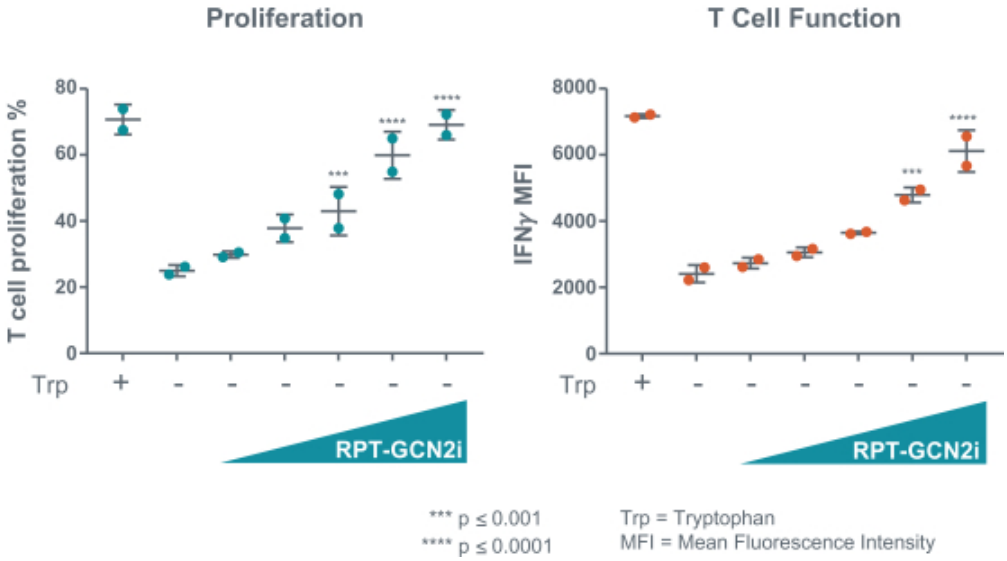
We are developing an RPT-GCN2i with the intent of selecting a preclinical candidate in 2020. We believe that the computational analysis of proprietary and public databases will allow us to identify tumor types or a subset of patients with a greater potential to benefit from GCN2 inhibition.

RPT-GCN2i Preclinical Data

An RPT-GCN2i Restores T Cell Proliferation and Function in Amino-Acid-Limited Conditions

Low levels of tryptophan in the TME can be immunosuppressive by blocking the activation and proliferation of effector cells. In six independent cell culture experiments with various human donors, an RPT-GCN2i statistically significantly ($p < 0.05$) increased effector T cell proliferation and function under nutrient starvation conditions in a dose-dependent manner to levels comparable to T cell proliferation and function in non-nutrient-deprived conditions. The ability of an RPT-GCN2i to recover effector cell proliferation was not limited to a single amino acid or nutrient. We have shown that GCN2 inhibition can relieve the immunosuppressive effects of tryptophan (shown below), arginine and glucose deprivation.

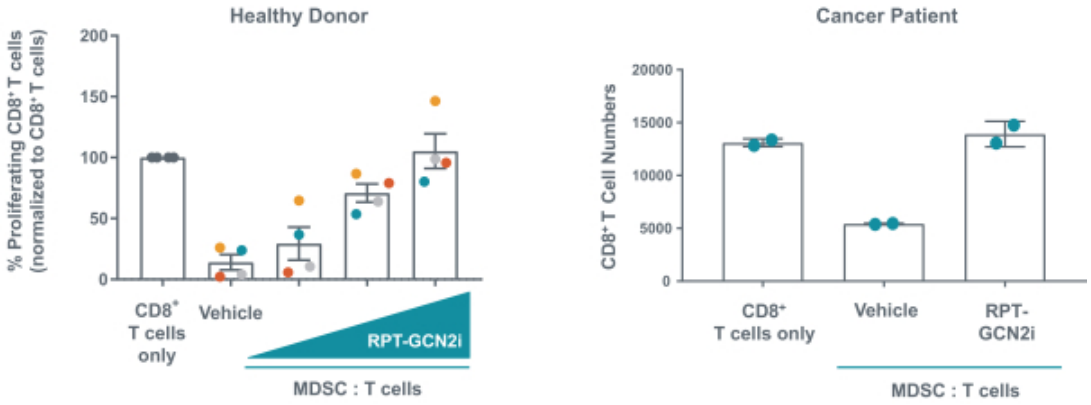
An RPT-GCN2i Restores Human CD8+ T Cell Proliferation and Function Under Conditions of Nutrient Starvation



An RPT-GCN2i Inhibits MDSC Immunosuppressive Function In Vitro

MDSCs are heterogeneous cells found in multiple cancer types that can cause immunosuppression through multiple pathways including the expression of enzymes, such as indoleamine 2,3-dioxygenase that metabolizes tryptophan. Incubation of activated $CD8^+$ T cells with MDSCs isolated from four healthy volunteers as well as from one cancer patient leads to a statistically significant ($p < 0.05$) inhibition of T cell proliferation, an effect that is reversed by an RPT-GCN2i in a dose-dependent manner with T cell proliferation comparable to T cells cultured without MDSC (range 80 to 148% of control).

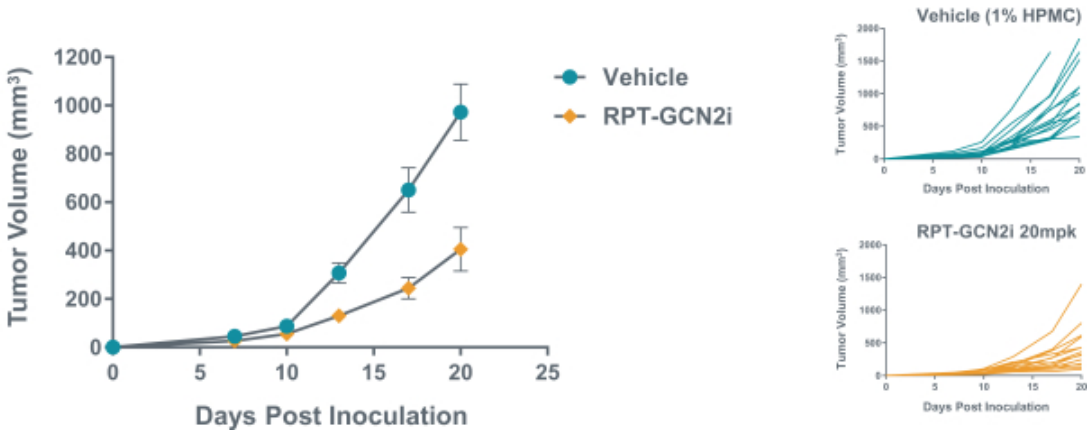
An RPT-GCN2i Reverses Suppressive Function of Healthy Donor and Cancer Patient-Derived MDSCs



An RPT-GCN2i Demonstrates Single Agent Activity in the CT26 Mouse Tumor Model

In a CT26 mouse tumor model, oral administration of an RPT-GCN2i in four independent experiments with ten mice per experimental arm led to a statistically significant ($p < 0.05$) reductions in tumor volume (at the last day of measurement) when dosed as a single agent. Single agent and combination antitumor activity has been demonstrated in additional mouse tumor models. We believe an RPT-GCN2i has the potential to have broad activity in stimulating the immune system in multiple tumor types either as a single agent or in combination with conventional or immune-based therapies.

An RPT-GCN2i Demonstrates Single Agent Activity in a CT26 Mouse Tumor Model



Our HPK1 Program

HPK1 is a negative regulator of T cell activation, and the inhibition of HPK1 has the potential to enhance T cell function and antitumor activity. HPK1 was identified in a RAPT computational screen, which also identified clinically validated targets including PD-1, as well as CCR4. We are refining the chemical structure of our lead HPK1 compounds utilizing high resolution crystal structures and demonstrated that inhibition of HPK1 enhanced activation of primary mouse and human T cells in vitro, as well as antigen-specific CD8+ T cell effector function in vivo. Oral administration of an HPK1 inhibitor resulted in single agent antitumor activity and complete tumor regression in multiple mice when dosed in combination with a checkpoint inhibitor

Intellectual Property

We strive to protect the proprietary technology, inventions and improvements that are commercially important to our business, including obtaining, maintaining, enforcing and defending our intellectual property rights, including patent rights, whether developed internally or licensed from third parties. We rely, in part, on trade secrets and know-how relating to our proprietary technology and drug candidates and continuing innovation to develop, strengthen and maintain our proprietary position. We also plan to rely, in part, on data exclusivity, market exclusivity and patent term extensions if and when available. Our commercial success will depend in part on our ability to obtain and maintain patent and other intellectual property protection for our technology, inventions and improvements; to preserve the confidentiality of our trade secrets; to defend and enforce our proprietary rights, including any patents that we own or may obtain in the future; and to operate without infringing, misappropriating or otherwise violating the valid and enforceable patents and other intellectual property rights of third parties. Intellectual property rights may not address all potential threats to our competitive advantage.

C-C Chemokine Receptor 4 (CCR4) Antagonist Franchise

As of December 31, 2019, our patent portfolio includes five patent families directed to CCR4 inhibiting compounds and their therapeutic uses, three of which are directed to FLX475 and another of which is directed to RPT193, as discussed in more depth below.

FLX475

As of December 31, 2019, with respect to FLX475, we own one issued U.S. patent directed to FLX475 and other related compounds, pharmaceutical compositions comprising the same and therapeutic methods of using the same for the treatment of diseases including cancers, one corresponding pending and allowed patent application in the U.S. and 16 corresponding pending patent applications in Australia, Brazil, Canada, China, Hong Kong, the European Patent Convention, India, Israel, Japan, South Korea, Mexico, New Zealand, Russia, Singapore, South Africa and Taiwan. Our issued U.S. patent, and any patents that may issue from our pending applications worldwide, are scheduled to expire in 2037, excluding any additional term for patent term adjustment(s) or extension(s), and assuming payment of all applicable maintenance or annuity fees. We also own one pending US provisional patent application directed to polymorphic forms of FLX475 and formulations thereof. In addition to the composition of matter patent and patent applications described above, as of December 31, 2019, we own one pending U.S. patent application, one pending Patent Cooperation Treaty (“PCT”) patent application and one pending Taiwan patent application directed to the use of CCR4 antagonists generally, including FLX475 specifically, in therapeutic methods of treating EBV positive cancers. Any patents that may issue from these pending applications, in the United States and worldwide, are scheduled to expire in 2038, excluding any additional term for patent term adjustment(s) or extension(s), and assuming national phase entries are timely made based upon the pending PCT application and payment of all applicable maintenance or annuity fees. Our pending PCT patent application is not eligible to become an issued patent until, among other things, we file a national stage patent application(s) within 30 months in the countries in which we seek patent protection. If we do not timely file any national stage patent applications, we may lose our priority date with respect to our PCT patent application and any patent protection on the inventions disclosed in such PCT patent application.

RPT193

As of December 31, 2019, with respect to RPT193, we own one pending U.S. patent application, one pending PCT patent application and one pending Taiwan patent application directed to RPT193 and other related compounds, pharmaceutical compositions comprising the same and therapeutic methods of using the same for the treatment of diseases such as immune, inflammatory, metabolic diseases or cancers. Any patents that may issue from these pending applications, in the United States and worldwide, are scheduled to expire in 2039,

excluding any additional term for patent term adjustment(s) or extension(s), and assuming national phase entries are timely made based upon the pending PCT application and payment of all applicable maintenance or annuity fees. Our pending PCT patent application is not eligible to become an issued patent until, among other things, we file a national stage patent application(s) within 30 months in the countries in which we seek patent protection. If we do not timely file any national stage patent applications, we may lose our priority date with respect to our PCT patent application and any patent protection on the inventions disclosed in such PCT patent application.

Our RPT-GCN2i Program

As of December 31, 2019, with respect to RPT-GCN2i product development, we own one pending U.S. provisional patent application, one pending U.S. non-provisional patent application, one pending PCT patent application and one pending Taiwan patent application, all directed to certain compounds in development, pharmaceutical compositions of the same and therapeutic methods of using the same. Any patents that may issue from these pending patent applications are scheduled to expire in 2039, excluding any additional term for patent term adjustment or extension, and assuming national phase entries are timely made based upon the pending PCT application and payment of all applicable maintenance or annuity fees. Our pending PCT patent application is not eligible to become an issued patent until, among other things, we file a national stage patent application(s) within 30 months in the countries in which we seek patent protection. If we do not timely file any national stage patent applications, we may lose our priority date with respect to our PCT patent application and any patent protection on the inventions disclosed in such PCT patent application.

Any of our provisional patent applications are not eligible to become issued patents until, among other things, we file a non-provisional patent application within 12 months of filing the related provisional patent application. If we do not timely file any non-provisional patent application, we may lose our priority date with respect to any such provisional patent application and any patent protection on the inventions disclosed in any such provisional patent application. With respect to our drug candidates, we intend to develop and commercialize in the normal course of business, we intend to pursue patent protection covering, when possible, compositions, methods of use, dosing and formulations. We may also pursue patent protection with respect to manufacturing and drug development processes and technologies. We do not currently own any patents or patent applications relating to our proprietary discovery and development engine. Obtaining and maintaining patent protection depends on compliance with various procedural, document submission, fee payment, and other requirements imposed by governmental patent agencies. We may not be able to obtain patent protections for our compositions, methods of use, dosing and formulations, manufacturing and drug development processes and technologies throughout the world. Issued patents can provide protection for varying periods of time, depending upon the date of filing of the patent application, the date of patent issuance and the legal term of patents in the countries in which they are obtained. In general, patents issued for applications filed in the United States expire 20 years after the earliest effective filing date. In addition, in certain instances, the term of an issued U.S. patent that covers or claims an FDA approved product can be extended to recapture a portion of the term effectively lost as a result of the FDA regulatory review period, which is called patent term extension. The restoration period cannot be longer than five years and the total patent term, including the restoration period, must not exceed 14 years following FDA approval. For more information regarding patent term extensions, please see “Business—U.S. Patent Term Restoration and Marketing Exclusivity” below. The term of patents outside of the United States varies in accordance with the laws of the foreign jurisdiction, but typically is also 20 years from the earliest effective filing date. However, the actual protection afforded by a patent varies on a product-by-product basis, from country-to-country, and depends upon many factors, including the type of patent, the scope of its coverage, the availability of regulatory-related extensions, the availability of legal remedies in a particular country and the validity and enforceability of the patent. The patent term may be inadequate to protect our competitive position on our products for an adequate amount of time. For more information regarding the risks related to our intellectual property, please see “Risk Factors—Risks Related to Our Intellectual Property.”

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. No consistent policy regarding the scope of claims allowable in patents in the field of

biopharmaceuticals has emerged in the United States. The relevant patent laws and their interpretation outside of the United States is also uncertain. Changes in either the patent laws or their interpretation in the United States and other countries may diminish our ability to protect our technology or drug candidates and could affect the value of such intellectual property. In particular, our ability to stop third parties from making, using, selling, offering to sell or importing products that infringe our intellectual property will depend in part on our success in obtaining, maintaining, enforcing and defending patent claims that cover our technology, inventions and improvements. We cannot guarantee that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications we may file in the future, nor can we ensure that any patents that may be granted to us in the future will be commercially useful in protecting our products, the methods of use or manufacture of those products. Moreover, any issued patents we obtain do not guarantee us the right to practice our technology in relation to the commercialization of our products. Patent and other intellectual property rights in the pharmaceutical and biotechnology space are evolving and involve many risks and uncertainties. For example, third parties may have blocking patents that could be used to prevent us from commercializing our drug candidates and practicing our proprietary technology, and our patent rights may be challenged, invalidated or circumvented, which could limit our ability to stop competitors from marketing related products or could limit the term of patent protection that otherwise may exist for our drug candidates. In addition, the scope of the rights granted under any issued patent that we own or license, now or in the future, may not provide us with protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may independently develop similar technologies that are outside the scope of the rights granted under any issued patents we obtain. For these reasons, we may face competition with respect to our drug candidates. Moreover, because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any particular drug candidate can be commercialized, any patent protection for such product may expire or remain in force for only a short period following commercialization, thereby reducing the commercial advantage the patent provides.

In addition to patent protection, we rely upon unpatented trade secrets and confidential know-how and continuing technological innovation to develop and maintain our competitive position. However, trade secrets and confidential information are difficult to protect. We seek to protect our proprietary information, in part, using confidentiality agreements with any future collaborators, scientific advisors, employees and consultants, and invention assignment agreement with our employees. We also have agreements requiring assignment of inventions with selected consultants, scientific advisors and collaborators. These agreements may not provide meaningful protection. These agreements may also be breached, and we may not have an adequate remedy for any such breach. In addition, our trade secrets and/or confidential know-how may become known or be independently developed by a third party, or misused by any collaborator to whom we disclose such information. Despite any measures taken to protect our intellectual property, unauthorized parties may attempt to copy aspects of our products or drug candidates or obtain or use information that we regard as proprietary. Although we take steps to protect our proprietary information, third parties may independently develop the same or similar proprietary information or may otherwise gain access to our proprietary information. As a result, we may be unable to meaningfully protect our trade secrets and proprietary information. For more information regarding the risks related to our intellectual property, please see “Risk Factors—Risks Related to Our Intellectual Property.”

Collaboration and License Agreement

In December 2019, we entered into a Collaboration and License Agreement with Hanmi, a corporation organized under the laws of the Republic of Korea, pursuant to which we granted Hanmi an exclusive license to develop, manufacture and commercialize FLX475 and related compounds and products with respect to human cancers in the Republic of Korea, the Republic of China (Taiwan), and the People’s Republic of China, including the special administrative regions of Macau and Hong Kong (the “Hanmi Territory”) and certain sublicense rights. In consideration of such rights, under the agreement we will receive $10.0 million in an upfront payment and expected near-term milestone payment, and will be eligible to receive (i) additional contingent payments of up to $108.0 million upon the achievement of specified milestones, consisting of up to $48.0 million based on the dosing of the first patient in a Phase 3 clinical trial in the Hanmi Territory and the filing and approval of a new

drug application in the Hanmi Territory and up to $60.0 million based on annual net sales, and (ii) low double-digit royalties on future net sales of FLX475 in the Hanmi Territory. Royalties will be payable on a product-by-product and country-by-country basis for a period commencing with the first commercial sale until the latest of (a) the expiration of the relevant patent right, (b) the expiration of regulatory or data exclusivity granted by the applicable governmental authority, and (c) five years from such first commercial sale (such period being the "Royalty Term" for such product and country); provided that the royalties will be reduced (x) by 50% if the product in question is not covered by a valid claim during the Royalty Term in the applicable country, (y) in connection with a license obtained from such third party in order to develop, manufacture or commercialize FLX475 in the Hanmi Territory and (z) by a percentage dependent on any generic products' market share in the Hanmi Territory. If we sponsor Phase 3 clinical trials for FLX475 for human cancers, Hanmi will have the right to participate in such trials in the Hanmi Territory. We will supply FLX475 for use in Hanmi's Phase 2 clinical trials and Hamni will reimburse us for our manufacturing costs. If requested, we will facilitate technology transfer to Hanmi for their manufacture of FLX475 product for Phase 3 trials and commercialization. The term of the agreement will continue until Hanmi's royalty payment obligations have expired, unless sooner terminated by Hanmi for convenience, safety reasons, if we abandon our development of FLX475 and related products, if we do not consent to Hanmi's use of FLX475 in any study required by applicable governmental authorities, or breach by us of our representations and warranties under the agreement. The agreement may also be terminated by either party in connection with a material breach by, or insolvency of, the other party. If Hanmi terminates the agreement with cause or for our abandonment of development of FLX475 and related products, material breach or insolvency, Hanmi will retain a perpetual license to certain our intellectual property related to FLX475.

Clinical Trial Collaboration and Supply Agreement

In November 2018, we entered into a clinical trial collaboration and supply agreement with MSD International GmbH, an affiliate of Merck (known as MSD outside the United States and Canada), under which we will conduct a clinical trial evaluating FLX475 as a monotherapy and in combination with KEYTRUDA® (pembrolizumab), Merck's anti-PD-1 therapy, in patients with advanced cancers. We are the sponsor of the clinical trial and are responsible for the costs of conducting it, and Merck will supply KEYTRUDA® for use in the clinical trial at no charge to us except that we may be required to reimburse Merck's manufacturing costs upon certain early termination events. Neither party will have any other obligations to reimburse any costs or expenses incurred by the other party. We retain ownership of the quantities of FLX475 used in the clinical trial and we will own the quantities of KEYTRUDA® supplied to us by Merck for use in the clinical trial. The agreement provides for joint ownership of any inventions, clinical data and results generated in the clinical trial that relate to the combined use of the two drugs. Merck will solely own any inventions generated in the clinical trial that relate solely to KEYTRUDA® and all data resulting from testing performed by or on behalf of Merck upon samples collected during the clinical trial. We will solely own any inventions generated in the clinical trial that relate solely to FLX475, clinical data resulting from the use of FLX475 as a monotherapy, and from all data resulting from testing performed by or on behalf of us upon samples collected during the clinical trial. The term of the agreement will continue until delivery of the final report for the clinical trial, provided that either party may terminate the agreement due to the other party's uncured material breach, a violation of anti-corruption obligations, patient safety concerns, regulatory action that prevents supply of such party's compound, or such party's termination of its compound's development or withdrawal of its compound's regulatory approval. Merck may also terminate the agreement if we fail to make any changes to the clinical trial protocol regarding the use of KEYTRUDA® that are reasonably requested by Merck to address any concern raised by Merck that KEYTRUDA® is being used in the clinical trial in an unsafe manner.

Competition

The biotechnology and pharmaceutical industries, including the oncology and inflammatory disease fields, are characterized by rapidly advancing technologies, strong competition and an emphasis on intellectual property protection. We face substantial competition from many different sources, including large and specialty

pharmaceutical and biotechnology companies, academic research institutions, governmental agencies and public and private research institutions. We believe that the key competitive factors affecting the success of any of our drug candidates will include patient selection strategies, efficacy (single and combination strategies), safety profile, method of administration, cost, level of promotional activity and intellectual property protection.

If approved, FLX475 will compete with current therapies approved for the treatment of cancer, particularly immuno-oncology. Potential immuno-oncology therapeutics are being developed or marketed by many large and specialty pharmaceutical and biotechnology companies such as Merck, Bristol-Myers Squibb, Novartis, AstraZeneca, Pfizer and Roche/Genentech. Additionally, there is one approved CCR4-targeting T_{reg}-depleting antibody, mogamulizumab developed by Kyowa Hakko Kirin, as well as other T_{reg}-targeting agents currently in early development by companies such as ChemoCentryx, Tusk/Roche and Agenus/Gilead.

RPT193 is a CCR4 antagonist intended to treat allergic disease, including AD and other diseases along the atopic march. If approved for AD, we will face branded competition from dupilumab (marketed by Regeneron Pharmaceuticals, Inc. and Sanofi S.A. as Dupixent), a biologic recently approved. In addition, there are several companies developing treatments that may be approved for AD, including large pharmaceutical and biotechnology companies such as Pfizer, Lilly/Incyte, AbbVie, AnaptysBio, Dermira and Amgen/AstraZeneca.

There are several large and specialty pharmaceutical companies, as well as biotechnology companies with marketed or late stage assets targeting the Th2 pathway along the atopic march, which includes Amgen, AstraZeneca, Chiesi Farmaceutici, GSK, Novartis, Roche, Sanofi and Teva Pharmaceuticals.

Many of the companies against which we may compete have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trials sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

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 drug products such as those we are developing. We, along with third-party contractors, 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 or licensure of our drug candidates.

The process required by the FDA before drug 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 current Good Laboratory Practices ("GLP"), regulation;
- submission to the FDA of an IND, which must become effective before clinical trials may begin and must be updated annually or when significant changes are made;
- approval by an independent Institutional Review Board ("IRB"), or ethics committee at each clinical site before the trial is commenced;

- performance of adequate and well-controlled human clinical trials to establish the safety and efficacy of the proposed drug candidate for its intended purpose;
- preparation of and submission to the FDA of an NDA after completion of all pivotal clinical trials;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- a determination by the FDA within 60 days of its receipt of an NDA to file the application for review;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed product is produced to assess compliance with cGMP, and of selected clinical investigation sites to assess compliance with Good Clinical Practices ("GCP"); and
- FDA review and approval of the NDA to permit commercial marketing of the product for particular indications for use in the United States.

Preclinical and Clinical Development

Prior to beginning the first clinical trial with a drug candidate, we must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug product to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical trials. The IND also includes results of animal and in vitro studies assessing the toxicology, pharmacokinetics, pharmacology, and pharmacodynamic characteristics of the product; chemistry, manufacturing, and controls information; and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical trial. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site, and must monitor the study until completed. Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing clinical trials and clinical trial results to public registries.

For purposes of NDA approval, human clinical trials are typically conducted in three sequential phases that may overlap.

- *Phase 1*—The investigational product is initially introduced into healthy human subjects or patients with the target disease or condition. These studies are 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 on effectiveness.

- *Phase 2*—The investigational product is administered 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. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials. Some trials may combine aspects of Phase 1 and Phase 2 into a single clinical trial, which we refer to as a "seamless" study that can examine both safety in healthy volunteers and safety and preliminary efficacy in patients with a specific disease.

- *Phase 3*—The investigational product is administered 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.

A registrational trial is a clinical trial that adequately meets regulatory agency requirements for the evaluation of a drug candidate's efficacy and safety such that it can be used to justify the approval of the drug. Generally, registrational trials are Phase 3 trials but may be Phase 2 trials if the trial design provides a reliable assessment of clinical benefit, particularly in situations where there is an unmet medical need.

In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These so-called Phase 4 studies may be made a condition to approval of the NDA. Concurrent with clinical trials, companies may complete additional animal studies and develop additional information about the characteristics of the drug candidate, and must finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the drug candidate and, among other things, must develop methods for testing the final product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the drug candidate does not undergo unacceptable deterioration over its shelf life.

NDA Submission and Review

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of an NDA requesting approval to market the product for one or more indications. The NDA must include all relevant data available from pertinent preclinical and clinical trials, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls, and proposed labeling, among other things. A determination by the FDA within 60 days of the receipt of an NDA to file the application for review for its completeness is initiated at the time of submission. If the FDA determines there is significance to the missing or incomplete information in the context of the proposed drug product, the proposed indication(s), and the amount of time needed to address any given deficiency, it can issue a refusal-to-file letter. The submission of an NDA requires payment of a substantial application user fee to FDA, unless a waiver or exemption applies.

Once an NDA has been submitted, the FDA's goal is to review standard applications within ten months after it accepts the application for filing, or, if the application qualifies for priority review, six months after the FDA accepts the application for filing. In both standard and priority reviews, the review process is often significantly extended by FDA requests for additional information or clarification. The FDA reviews an NDA to determine, among other things, whether a product is safe and effective. The FDA may convene an advisory committee to provide clinical insight on application review questions. Before approving an NDA, the FDA will

typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving an NDA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

After the FDA evaluates an NDA and conducts inspections of manufacturing facilities where the product will be produced, the FDA may issue an approval letter or a Complete Response letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A Complete Response letter will describe all of the deficiencies that the FDA has identified in the NDA. In issuing the Complete Response letter, the FDA may recommend actions that the applicant might take to place the NDA in condition for approval, including requests for additional information or clarification. The FDA may delay or refuse approval of an NDA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval will be granted for particular indications and may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the NDA with a Risk Evaluation and Mitigation Strategy ("REMS"), to ensure the benefits of the product outweigh its risks. A REMS is a safety strategy to manage a known or potential serious risk associated with a product and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. 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 of the product based on the results of these post-marketing studies.

Expedited Development and Review Programs

The FDA offers a number of expedited development and review programs for qualifying drug candidates. The fast track program is intended to expedite or facilitate the process for reviewing new products that meet certain criteria. Specifically, new products are eligible for fast track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. The sponsor of a fast track product has opportunities for frequent interactions with the review team during product development and, once an NDA is submitted, the product may be eligible for priority review. A fast track product may also be eligible for rolling review, where the FDA may consider for review sections of the NDA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the NDA, the FDA agrees to accept sections of the NDA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the NDA.

A product intended to treat a serious or life-threatening disease or condition may also be eligible for breakthrough therapy designation to expedite its development and review. A product can receive breakthrough therapy designation if preliminary clinical evidence indicates that the product may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial

treatment effects observed early in clinical development. The designation includes all of the fast track program features, as well as more intensive FDA interaction and guidance beginning as early as Phase 1 and an organizational commitment to expedite the development and review of the product, including involvement of senior managers.

Any product is eligible for priority review if it has the potential to provide a significant improvement in the treatment, diagnosis or prevention of a serious disease or condition compared to marketed products. For products containing new molecular entities, priority review designation means the FDA's goal is to take action on the marketing application within six months of the 60-day filing date (compared with ten months under standard review).

Additionally, products studied for their safety and effectiveness in treating serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that 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. As a condition of accelerated approval, the FDA will generally require the sponsor to perform adequate and well-controlled post-marketing clinical trials to verify and describe the anticipated effect on irreversible morbidity or mortality or other clinical benefit. In addition, the FDA currently requires, as a condition for accelerated approval, pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

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 more than 200,000 individuals in the United States for which there is no reasonable expectation that the cost of developing and making available in the United States a drug or biologic for this type of disease or condition will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting an NDA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. The orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review or approval process.

If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusive approval (or exclusivity), which means that the FDA may not approve any other applications, including a full NDA, to market the same drug for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. Orphan drug exclusivity does not prevent the FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the application user fee.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Post-Approval Requirements

Any products manufactured or distributed by us pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping,

reporting of adverse experiences, periodic reporting, product sampling and distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing user fee requirements, under which FDA assesses an annual program fee for each product identified in an approved NDA. Drug 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 cGMP, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting requirements upon us and any third-party manufacturers that we may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. 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; imposition of post-market studies or clinical trials to assess new safety risks; or imposition of distribution restrictions or other restrictions under an REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of a 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 pending applications or supplements to approved applications, or suspension or revocation of existing product approvals;
- product seizure or detention, or refusal of the FDA to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising and promotion of biologics and drugs. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA and in accordance with the provisions of the approved label. However, companies may share truthful and not misleading information that is otherwise consistent with a product's FDA approved labeling. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products.

FDA Regulation of Companion Diagnostics

A therapeutic product may rely upon an in vitro companion diagnostic for use in selecting the patients that will be more likely to respond to that therapy. If an in vitro diagnostic is essential to the safe and effective use of the therapeutic product, then the FDA generally will require approval or clearance of the diagnostic at the

same time that the FDA approves the therapeutic product. According to FDA guidance, a companion diagnostic device used to make treatment decisions in clinical trials of a drug generally will be considered an investigational device unless it is employed for an intended use for which the device is already approved or cleared. If used to make critical treatment decisions, such as patient selection, the diagnostic device generally will be considered a significant risk device under the FDA's Investigational Device Exemption ("IDE"), regulations. Thus, the sponsor of the diagnostic device will be required to comply with the IDE regulations. According to the guidance, if a diagnostic device and a drug are to be studied together to support their respective approvals, both products can be studied in the same investigational trial, if the trial meets both the requirements of the IDE regulations and the IND regulations. The guidance provides that depending on the details of the trial plan and subjects, a sponsor may seek to submit an IND alone, or both an IND and an IDE.

Pursuing FDA approval of an in vitro companion diagnostic would require either a pre-market notification, also called 510(k) clearance, or a pre-market approval ("PMA"), for that diagnostic. The review of companion diagnostics involves coordination of review with the FDA's Center for Devices and Radiological Health.

The PMA process, including the gathering of clinical and nonclinical data and the submission to and review by the FDA, can take several years or longer. The applicant must prepare and provide the FDA with reasonable assurance of the device's safety and effectiveness, including information about the device and its components regarding, among other things, device design, manufacturing and labeling. PMA applications are subject to an application fee. In addition, PMAs for devices must generally include the results from extensive preclinical and adequate and well-controlled clinical trials to establish the safety and effectiveness of the device for each indication for which FDA approval is sought. In particular, for a diagnostic, the applicant must demonstrate that the diagnostic produces reproducible results. As part of the PMA review, the FDA will typically inspect the manufacturer's facilities for compliance with the Quality System Regulation ("QSR"), which imposes elaborate testing, control, documentation and other quality assurance requirements.

U.S. Patent Term Restoration and Marketing Exclusivity

The term of a patent depends upon the laws of the country in which it is issued. In most jurisdictions, a patent term is 20 years from the earliest filing date of a non-provisional patent application. Depending upon the timing, duration and specifics of the FDA approval of our drug candidates, one or more issued U.S. patents we obtain may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years beyond the normal expiration of the patent, limited to the approved indication (or any additional indications approved during the period of extension), as compensation for patent term lost during the FDA regulatory review process. The patent term restoration period granted on a patent covering a product is generally one-half the time between the effective date of an IND and the submission date of an NDA, plus the time between the submission date of an NDA and the ultimate approval date of that application. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. Only one patent applicable to an approved product is eligible for extension and only those claims covering the approved product, a method for using it, or a method for manufacturing it may be extended. Additionally, the application for the extension must be submitted prior to the expiration of the patent in question. A patent that covers multiple products for which approval is sought can only be extended in connection with one of the approvals. The USPTO, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we intend to apply for restoration of patent term for an issued patent we own, and if eligible for such restoration, to add patent term beyond its current expiration date, depending on the expected length of the clinical trials and other factors involved in the filing of the relevant NDA. There can be no assurance that any of our pending patent applications will be issued or that we will benefit from any patent term extension.

Marketing exclusivity provisions under the United States Federal Food, Drug, and Cosmetic Act ("FDCA") can also delay the submission or the approval of certain marketing applications for competing

products. The FDCA provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to obtain approval of an NDA for a new chemical entity. A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance. During the exclusivity period, the FDA may not accept for review an abbreviated new drug application ("ANDA"), or a 505(b)(2) NDA submitted by another company for another drug based on the same active moiety, regardless of whether the drug is intended for the same indication as the original innovator drug or for another indication. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement to one of the patents listed with the FDA by the innovator NDA holder. The FDCA also provides three years of marketing exclusivity for an NDA, or supplement to an existing NDA, if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example new indications, dosages or strengths of an existing drug. This three-year exclusivity covers only the modification for which the drug received approval on the basis of the new clinical investigations and does not prohibit the FDA from approving ANDAs or 505(b)(2) applications for drugs containing the active agent for the original indication or condition of use. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA. However, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness. Orphan drug exclusivity, as described below, may offer a seven-year period of marketing exclusivity, except in certain circumstances. Pediatric exclusivity is another type of regulatory market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods and patent terms. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric trial in accordance with an FDA-issued "Written Request" for such a trial.

European Drug Development

In Europe, our future drugs may also be subject to extensive regulatory requirements. As in the United States, medicinal products can only be marketed if a marketing authorization from the competent regulatory agencies has been obtained.

Similar to the United States, the various phases of preclinical and clinical research in Europe are subject to significant regulatory controls. Although the EU Clinical Trials Directive 2001/20/EC has sought to harmonize the European Union clinical trials regulatory framework, setting out common rules for the control and authorization of clinical trials in the European Union, the European Union Member States have transposed and applied the provisions of the Directive differently. This has led to significant variations in the member state regimes. Under the current regime, before a clinical trial can be initiated it must be approved in each of the European Union countries where the trial is to be conducted by two distinct bodies: the National Competent Authority ("NCA"), and one or more Ethics Committees ("ECs"). Under the current regime, all suspected unexpected serious adverse reactions to the investigated drug that occur during the clinical trial have to be reported to the NCA and ECs of the Member State where they occurred.

In 2014, a new Clinical Trials Regulation 536/2014, replacing the current Directive, was adopted. The new Regulation will become directly applicable in all EU Member States (without national implementation) once the EU Portal and Database are fully functional. It is expected that the Regulation will apply in 2019. The new Regulation seeks to simplify and streamline the approval of clinical trials in the European Union. For example, the sponsor shall submit a single application for approval of a clinical trial via the EU Portal. As part of the application process, the sponsor shall propose a reporting Member State, who will coordinate the validation and evaluation of the application. The reporting Member State shall consult and coordinate with the other concerned Member States. If an application is rejected, it can be amended and resubmitted through the EU Portal. If an approval is issued, the sponsor can start the clinical trial in all concerned Member States. However, a concerned Member State can in limited circumstances declare an "opt-out" from an approval. In such a case, the clinical trial cannot be conducted in that Member State. The Regulation also aims to streamline and simplify the rules on

safety reporting and introduces enhanced transparency requirements such as mandatory submission of a summary of the clinical trial results to the EU Database.

European Drug Review and Approval

In the European Economic Area ("EEA"), which is comprised of the 28 Member States of the European Union plus Norway, Iceland and Liechtenstein, medicinal products can only be commercialized after obtaining a Marketing Authorization ("MA"). There are two types of marketing authorizations.

The Community MA, which is issued by the European Commission through the Centralized Procedure, based on the opinion of the Committee for Medicinal Products for Human Use ("CHMP"), of the EMA and which is valid throughout the entire territory of the EEA. The Centralized Procedure is mandatory for certain types of drugs, such as biotechnology medicinal drugs, orphan medicinal drugs, and medicinal drugs containing a new active substance indicated for the treatment of AIDS, cancer, neurodegenerative disorders, diabetes, autoimmune and viral diseases. The Centralized Procedure is optional for drugs containing a new active substance not yet authorized in the EEA, or for drugs that constitute a significant therapeutic, scientific or technical innovation or which are in the interest of public health in the European Union.

National MAs, which are issued by the competent authorities of the Member States of the EEA and only cover their respective territory, are available for drugs not falling within the mandatory scope of the Centralized Procedure. Where a drug has already been authorized for marketing in a Member State of the EEA, this National MA can be recognized in other Member States through the Mutual Recognition Procedure. If the drug has not received a National MA in any Member State at the time of application, it can be approved simultaneously in various Member States through the Decentralized Procedure. Under the Decentralized Procedure, an identical dossier is submitted to the competent authorities of each of the Member States in which the MA is sought, one of which is selected by the applicant as the Reference Member State ("RMS"). The competent authority of the RMS prepares a draft assessment report, a draft summary of the drug characteristics ("SPC"), and a draft of the labeling and package leaflet, which are sent to the other Member States ("Member States Concerned") for their approval. If the Member States Concerned raise no objections, based on a potential serious risk to public health, to the assessment, SPC, labeling, or packaging proposed by the RMS, the drug is subsequently granted a national MA in all the Member States (i.e. in the RMS and the Member States Concerned).

Under the above-described procedures, before granting the MA, the EMA or the competent authorities of the Member States of the EEA make an assessment of the risk-benefit balance of the drug on the basis of scientific criteria concerning its quality, safety and efficacy.

European Chemical Entity Exclusivity

In Europe, new chemical entities, sometimes referred to as new active substances, qualify for eight years of data exclusivity upon marketing authorization and an additional two years of market exclusivity. This data exclusivity, if granted, prevents regulatory authorities in the European Union from referencing the innovator's data to assess a generic application for eight years, after which generic marketing authorization can be submitted, and the innovator's data may be referenced, but not approved for two years. The overall ten-year period will be extended to a maximum of 11 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.

European Union General Data Protection Regulation

In addition to EU regulations related to the approval and commercialization of our products, we may be subject to the EU's General Data Protection Regulation ("GDPR"). The GDPR went into effect on May 25, 2018.

The GDPR introduced new data protection requirements in the European Union, as well as potential fines for noncompliant companies of up to the greater of €20 million or 4% of annual global revenue. The regulation imposes numerous new requirements for the collection, use, storage and disclosure of personal information, including more stringent requirements relating to consent and the information that must be shared with data subjects about how their personal information is used, the obligation to notify regulators and affected individuals of personal data breaches, extensive new internal privacy governance obligations and obligations to honor expanded rights of individuals in relation to their personal information (e.g., the right to access, correct and delete their data). In addition, the GDPR includes restrictions on cross-border data transfers. The GDPR increased our responsibility and liability in relation to personal data that we process, and we may be required to put in place additional mechanisms to ensure compliance with the new EU data protection rules. Further, the United Kingdom's vote in favor of exiting the EU, often referred to as Brexit, has created uncertainty with regard to data protection regulation in the United Kingdom. In particular, it is unclear whether the United Kingdom will enact data protection legislation equivalent to the GDPR and how data transfers to and from the United Kingdom will be regulated.

Rest of the World Regulation

For other countries outside of the European Union and the United States, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, drug licensing, pricing and reimbursement vary from country to country. In all cases the clinical trials must be conducted in accordance with GCP requirements and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

If we fail to comply with applicable foreign regulatory requirements, we may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

Coverage and Reimbursement

Sales of our drugs will depend, in part, on the extent to which our drugs will be covered by third-party payors, such as government health programs, commercial insurance and managed healthcare organizations. These third-party payors are increasingly reducing reimbursements for medical drugs and services. Additionally, the containment of healthcare costs has become a priority of federal and state governments, and the prices of drugs have been a focus in this effort. The U.S. government, state legislatures and foreign governments have shown significant interest in implementing cost-containment programs, including price controls, restrictions on reimbursement and requirements for substitution of generic drugs.

There may be significant delays in obtaining coverage and 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 of the United States. Moreover, eligibility for coverage and 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, intellectual property protection, manufacture, sale and distribution expenses. 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. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement policies, but also have their own methods and approval process apart from Medicare determinations.

We plan to develop, either by ourselves or with collaborators, in vitro companion diagnostic tests for our drug candidates for certain indications. We, or our collaborators, will be required to obtain coverage and reimbursement for these tests separate and apart from the coverage and reimbursement we seek for our drug candidates, once approved.

In addition, in some foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing vary widely from country to country. For example, the European Union provides options for its member states to restrict the range of medicinal drugs for which their national health insurance systems provide reimbursement and to control the prices of medicinal drugs for human use. A member state may approve a specific price for the medicinal drug or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal drug on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical drugs will allow favorable reimbursement and pricing arrangements for any of our drugs. Historically, drugs launched in the European Union do not follow price structures of the United States and generally tend to be significantly lower.

Healthcare Reform

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 drug candidates, restrict or regulate post-approval activities and affect a biopharmaceutical company's ability to profitably sell any approved drugs.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 ("MMA") established the Medicare Part D program to provide a voluntary prescription drug benefit to Medicare beneficiaries. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities that provide coverage of outpatient prescription drugs. Unlike Medicare Parts A and B, Part D coverage is not standardized. Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, though not necessarily all the drugs in each category or class. Any formulary used by a Part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee. Government payment for some of the costs of prescription drugs may increase demand for drugs for which we obtain marketing approval. However, any negotiated prices for our drugs covered by a Part D prescription drug plan will likely be lower than the prices we might otherwise obtain. Moreover, while the MMA applies only to drug benefits for Medicare beneficiaries, private third-party payors often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment that results from the MMA may result in a similar reduction in payments from non-governmental third-party payors.

The American Recovery and Reinvestment Act of 2009 provides funding for the federal government to compare the effectiveness of different treatments for the same illness. The plan for the research was published in 2012 by the U.S. Department of Health and Human Services ("HHS"), the Agency for Healthcare Research and Quality and the National Institutes for Health, and periodic reports on the status of the research and related expenditures are made to Congress. Although the results of the comparative effectiveness studies are not intended to mandate coverage policies for public or private third-party payors, it is not clear what effect, if any, the research will have on the sales of our drug candidates, if any such drug or the condition that they are intended to treat are the subject of a trial. It is also possible that comparative effectiveness research demonstrating benefits in a competitor's drug could adversely affect the sales of our drug candidate. If third-party payors do not consider our drugs to be cost-effective compared to other available therapies, they may not cover our drugs after approval as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow us to sell our drugs on a profitable basis.

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 ("ACA") enacted in March 2010, has had a significant impact on the healthcare industry. The ACA expanded coverage for the uninsured while at the same time containing overall healthcare costs. With regard to pharmaceutical products, the ACA, among other things, addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, increased the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extended the rebate program to individuals enrolled in Medicaid managed care organizations, established annual fees and taxes on manufacturers of certain branded prescription drugs, and a new Medicare Part D coverage gap discount program, in which manufacturers must now agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D.

Some of the provisions of the ACA have yet to be fully implemented, while certain provisions have been subject to judicial and Congressional challenges as well as recent efforts by the current U.S. President's administration to repeal or replace certain aspects of the ACA. Since January 2017, the current U.S. President has signed two Executive Orders and other directives designed to delay the implementation of certain provisions of the ACA or otherwise circumvent some of the requirements for health insurance mandated by the ACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, it has enacted laws that modify certain provisions of the ACA such as removing penalties, starting January 1, 2019, for not complying with the ACA's individual mandate to carry health insurance, delaying the implementation of certain ACA-mandated fees, and increasing the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D. On December 14, 2018, a U.S. District Court Judge in the Northern District of Texas (Texas District Court Judge), ruled that the individual mandate is a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the Tax Cuts and Jobs Act, the remaining provisions of the ACA are invalid as well. On December 18, 2019, the U.S. Court of Appeals for the Fifth Circuit upheld the District Court's ruling with respect to the individual mandate but remanded the case to the District Court to consider whether other parts of the law can remain in effect. While the Texas District Court Judge, as well as the current U.S. President's administration and the Centers for Medicare & Medicaid Services ("CMS"), have stated that the ruling will have no immediate effect, it is unclear how this decision, subsequent appeals, and other efforts to repeal and replace the ACA will impact the ACA.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted. On August 2, 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 to Medicare payments to providers of up to 2% per fiscal year, started in April 2013, and, due to subsequent legislative amendments, will stay in effect through 2027 unless additional congressional action is taken. On January 2, 2013, the then-U.S. President signed into law the American Taxpayer Relief Act of 2012 ("ATRA"), which, among other things, also reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

Further, there has been heightened governmental scrutiny recently over the manner in which drug manufacturers set prices for their marketed products, which has resulted in several congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. For example, the current U.S. President's administration released a "Blueprint" to lower drug prices and reduce out-of-pocket costs of drugs that contains additional proposals to increase manufacturer competition, increase the negotiating power of certain federal

healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out-of-pocket costs of drug products paid by consumers. For example, in October 2018, CMS proposed a new rule that would require direct-to-consumer television advertisements of prescription drugs and biological products, for which payment is available through or under Medicare or Medicaid, to include in the advertisement the Wholesale Acquisition Cost, or list price, of that drug or biological product. On January 31, 2019, the HHS Office of Inspector General, proposed modifications to the federal Anti-Kickback Statute discount safe harbor for the purpose of reducing the cost of drug products to consumers which, among other things, if finalized, will affect discounts paid by manufacturers to Medicare Part D plans, Medicaid managed care organizations and pharmacy benefit managers working with these organizations. Although some of these and other proposed measures may require additional authorization to become effective, Congress and the current U.S. President's administration has each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs.

Additionally, on May 30, 2018, the Trickett Wendler, Frank Mongiello, Jordan McLinn, and Matthew Bellina Right to Try Act of 2017 ("Right to Try Act") was signed into law. The law, among other things, provides a federal framework for certain patients to access certain investigational new drug products that have completed a Phase 1 clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a pharmaceutical manufacturer to make its drug products available to eligible patients as a result of the Right to Try Act.

Other Healthcare Laws

We may also be subject to healthcare regulation and enforcement by the federal government and the states and foreign governments where we may market our drug candidates, if approved. These laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, privacy and security and physician sunshine laws and regulations.

The federal Anti-Kickback Statute prohibits, among other things, any person from knowingly and willfully offering, soliciting, receiving or paying remuneration, directly or indirectly, to induce either the referral of an individual, for an item or service or the purchasing or ordering of a good or service, for which payment may be made under federal healthcare programs such as the Medicare and Medicaid programs. The federal Anti-Kickback Statute is subject to evolving interpretations. In the past, the government has enforced the federal Anti-Kickback Statute to reach large settlements with healthcare companies based on sham consulting and other financial arrangements with physicians. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order 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 False Claims Act. The majority of states also have anti-kickback laws, which establish similar prohibitions and in some cases may apply to items or services reimbursed by any third-party payor, including commercial insurers.

Additionally, the federal civil and criminal false claims laws, including the False Claims Act, and civil monetary penalties law, prohibits knowingly presenting or causing the presentation of a false, fictitious or fraudulent claim for payment to the U.S. government. Actions under the False Claims Act may be brought by the Attorney General or as a qui tam action by a private individual in the name of the government. The federal government is using the False Claims Act, and the accompanying threat of significant liability, in its investigation and prosecution of pharmaceutical and biotechnology companies throughout the United States, for example, in connection with the promotion of products for unapproved uses and other sales and marketing practices. The government has obtained multi-million and multi-billion dollar settlements under the False Claims Act in addition to individual criminal convictions under applicable criminal statutes. Given the significant size of actual and potential settlements, it is expected that the government will continue to devote substantial resources to investigating healthcare providers' and manufacturers' compliance with applicable fraud and abuse laws.

The federal Health Insurance Portability and Accountability Act of 1996 ("HIPAA") also created additional federal civil and criminal penalties for, among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors, knowingly and willfully embezzling or stealing from a healthcare benefit program, willfully obstructing a criminal investigation of a healthcare offense, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

There has also been a recent trend of increased federal and state regulation of payments made to physicians and other healthcare providers. The ACA, through the Physician Payments Sunshine Act, imposes new reporting requirements on drug manufacturers for payments made by them to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Drug manufacturers are required to submit annual reports to the government and these reports are posted on a website maintained by CMS. Certain states also mandate implementation of compliance programs, impose restrictions on drug manufacturer marketing practices and/or require the tracking and reporting of gifts, compensation and other remuneration to physicians.

We may also be subject to data privacy and security requirements that may impact the way in which we conduct research and operate our business. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act ("HITECH"), and their respective implementing regulations, including the final omnibus rule published on January 25, 2013, impose obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information on covered entities, including certain healthcare providers, health plans, and healthcare clearinghouses, as well as individuals and entities that provide services on behalf of a covered entity that involve individually identifiable health information, known as business associates. In addition, we may be directly subject to certain state laws concerning data privacy and security. For example, California recently enacted the California Consumer Privacy Act ("CPPA"), which creates new individual privacy rights for California consumers (as defined in the law) and places increased privacy and security obligations on entities handling certain personal data of consumers or households. The CCPA requires covered companies to provide new disclosure to consumers about such companies' data collection, use and sharing practices, provide such consumers new ways to opt-out of certain sales or transfers of personal information, and provide consumers with additional causes of action. The CCPA took effect on January 1, 2020, and the California Attorney General may bring enforcement actions for violations beginning July 1, 2020. The CCPA was amended in September 2018 and November 2019, and it remains unclear what, if any, further modifications will be made to this legislation or how it will be interpreted. As currently written, the CCPA may impact our business activities and exemplifies the vulnerability of our business to the evolving regulatory environment related to personal data and protected health information. Existing state laws governing the privacy and security of personally identifiable information, and, in some states, health information, impose differing requirements, thus complicating our compliance efforts.

Legal Proceedings

From time to time, we are involved in various legal proceedings arising from the normal course of business activities. We are not presently a party to any litigation the outcome of which, we believe, if determined adversely to us, would individually or taken together have a material adverse effect on our business, operating results, cash flows, or financial condition. Defending such proceedings is costly and can impose a significant burden on management and employees, we may receive unfavorable preliminary or interim rulings in the course of litigation, and there can be no assurances that favorable final outcomes will be obtained.

Our Employees

As of December 31, 2019, we had 67 full-time employees, with 56 in research and development and 11 in general and administrative functions. As of December 31, 2019, 27 of our full-time employees had completed a Ph.D. or other advanced science or medical degree.

None of our employees is represented by a labor union or covered by collective bargaining agreements, and we have not experienced any work stoppages. We consider our relations with our employees to be good.

Our Facilities

Our corporate headquarters are located in South San Francisco, California, and comprise approximately 36,754 square feet of space, pursuant to an operating lease that expires in November 2026. This lease includes an option to extend for a further eight years, at market rates that prevail at the time of our election to extend.

We believe that these facilities are sufficient to meet our current needs. We also believe we will be able to obtain additional space, as needed, on commercially reasonable terms.

MANAGEMENT

The following table sets forth information for our executive officers and directors as of December 31, 2019:

Name	Age	Position
Executive Officers		
Brian Wong, M.D., Ph.D.	48	President, Chief Executive Officer and Director
Rodney Young	57	Chief Financial Officer and Secretary
William Ho, M.D., Ph.D.	54	Chief Medical Officer
Dirk Brockstedt, Ph.D.	51	Chief Scientific Officer
Key Employees		
David Wustrow, Ph.D.	60	Senior Vice President, Drug Discovery and Preclinical Development
Paul Kassner, Ph.D.	53	Vice President, Quantitative and Computational Biology
Karen C. Lam	46	Vice President, Finance and Corporate Controller
Non-Employee Directors		
William Rieflin(1)(2)	59	Chair of the Board of Directors
Michael F. Giordano, M.D.(2)(3)	61	Director
David V. Goeddel, Ph.D.	68	Director
Linda Kozick(3)	61	Director
Wendye Robbins, M.D.(1)	59	Director
Mary Ann Gray, Ph.D.(1)	67	Director

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

Executive Officers

Brian Wong, M.D., Ph.D. has served as a member of our board of directors and as our Chief Executive Officer since August 2015 and as our President since June 2019. From January 2009 to August 2015, he served as Vice President of Immunology and Discovery Research and most recently as Senior Vice President, Research and Head of Immuno-Oncology at Five Prime Therapeutics, Inc., a biopharmaceutical company. From 2005 to 2009, he served as Director of Research in the Inflammation Disease Biology Area at F. Hoffmann-La Roche Ltd., a pharmaceutical company. Dr. Wong received an M.D. from Weill Cornell Medical College and a Ph.D. in Immunology from Rockefeller University. Dr. Wong obtained a B.A. in Chemistry and Biochemistry from Oberlin College. We believe that Dr. Wong's extensive experience in the life sciences industry and his medical and scientific training provide him with the qualifications and skills to serve on our board of directors and as our President and Chief Executive Officer.

Rodney Young has served as our Chief Financial Officer since December 2019. Prior to that, he served as Chief Financial Officer at Cellerant Therapeutics, Inc., a biotechnology company, from June 2015 to November 2019. From May 2014 to February 2015, Mr. Young served as Chief Financial Officer at Aimmune Therapeutics, Inc., a public biotechnology company, and from September 2005 to December 2013 he served as Chief Financial Officer and Vice President, Finance and Administration at StemCells, Inc., a public biotechnology company. Mr. Young obtained an M.B.A. in Finance and Accounting from the Booth School of Business at the University of Chicago and received his B.A. in Economics from the University of Chicago.

William Ho, M.D., Ph.D. has served as our Chief Medical Officer since May 2015. From October 2012 to June 2016, he served as the Vice President of Clinical Development at Igenica Biotherapeutics, Inc., a

pharmaceutical company. From September 2005 to September 2012, he served in several positions up to Senior Medical Director in the Exploratory Clinical Development (BioOncology) group at Genentech, Inc., a biotechnology company. Dr. Ho completed his internship and residency in Internal Medicine at the University of California, San Francisco, and received his fellowship training in Medical Oncology at the University of Washington and Fred Hutchinson Cancer Research Center. Dr. Ho received an M.D. and a Ph.D. in Microbiology and Immunology from Stanford University and an A.B. in Molecular Biology from Princeton University.

Dirk Brockstedt, Ph.D. has served as our Chief Scientific Officer since June 2019. Prior to that he served as our Senior Vice President, Biology from January 2018 to June 2019. Since October 2017, he has also served as Executive in Residence at ShangPharma Innovation Inc., a healthcare investment company. From September 2011 to December 2017, he served as Senior Vice President of Research and Development and most recently as Executive Vice President of Research and Development at Aduro Biotech, Inc., a biopharmaceutical company. Dr. Brockstedt served as Director of Research at Anza Therapeutics, Inc. from 2007 to 2009, Director of Immunology at Cerus Corporation from 2002 to 2007 and Senior Research Scientist at Aventis Pharmaceuticals, Inc. from 1999 to 2002, each a biopharmaceutical company. Prior to that he was a post-doctoral fellow at the Stanford School of Medicine in the Department of Pathology. Dr. Brockstedt received a Ph.D. in Microbiology from the University of Kiel (graduate work performed at Stanford University) and an M.S. in Microbiology from the University of Kiel.

Key Employees

David Wustrow, Ph.D. has served as our Senior Vice President of Drug Discovery and Preclinical Development since January 2019. Prior to that, he served as our Vice President, Drug Discovery from February 2016 to January 2019. From June 2012 to February 2016, he served as Vice President of Chemical and Pharmaceutical Sciences at Cleave Biosciences, Inc., a biopharmaceutical company. Previously, he held several escalating positions at biotechnology and pharmaceutical companies, including XenoPort Inc., where he served as Vice President, Medicinal Chemistry from 2008 to 2011 and as Executive Director of Scientific Assessment and Licensing in 2012, Neurogen Technologies, Inc., where he served as Executive Director of Chemistry from 2005 to 2008, and Pfizer Inc., where he served as Senior Director of Neuroscience Chemistry from 2003 to 2005. Prior to that, Dr. Wustrow held positions of increasing responsibility at Pfizer Inc. and Parke Davis-Warner Lambert. Dr. Wustrow received an M.S. in Chemistry and a Ph.D. in Organic Synthesis from the University of Rochester. Dr. Wustrow obtained a B.S. in Chemistry from Pennsylvania State University.

Paul Kassner, Ph.D. has served as our Vice President of Quantitative and Computational Biology since January 2016. From January 2003 to December 2015 he served at Amgen, Inc., a biopharmaceutical company, most recently as Director of Research and Head of the Genome Analysis Unit. Dr. Kassner held positions of increasing responsibility at multiple biotechnology companies from 1997 to 2003, including Selective Genetics, Inc., Zyomyx, Inc., Pointilliste, Inc. and Tularik Inc. Dr. Kassner completed his postdoctoral training at UC San Diego, and received a Ph.D. in Immunology from Harvard University and a B.S. in Genetics and Development from the University of Illinois at Champaign-Urbana.

Karen C. Lam has served as our Vice President, Finance and Corporate Controller since June 2019. Prior to that, she was our Senior Director, Finance and Corporate Controller from September 2017 to June 2019. From August 2013 to September 2017, Ms. Lam was Senior Director, Controller of True North Therapeutics, Inc., a biotechnology company. From September 2009 to August 2013, she was Director, Controller at iPierian Inc., a development stage biotechnology company. Ms. Lam is a Certified Public Accountant (inactive) and received a B.S. in Business Administration from San Francisco State University.

Non-Employee Directors

William J. Rieflin, J.D. has served on our board of directors since April 2016 and as the chair of our board of directors since June 2019. From September 2010 to September 2018, he served as the Chief Executive

Officer of NGM Biopharmaceuticals. From 2004 until 2010, Mr. Rieflin served as President of XenoPort, Inc., a biotechnology company. Mr. Rieflin also serves as Executive Chairman of the board of directors of NGM Biopharmaceuticals. Mr. Rieflin previously served on the board of directors of Anacor Pharmaceuticals, Inc., a pharmaceutical company, from April 2011 to June 2016 and of XenoPort, Inc. from September 2010 to July 2016. Mr. Rieflin obtained a J.D. from Stanford Law School and an M.B.A. from the University of Chicago. Mr. Rieflin received a B.S. in Industrial and Labor Relations from Cornell University. We believe that Mr. Rieflin's extensive experience in the biopharmaceutical industry, his industry expertise and financial knowledge, and his experience as a member of the board of directors of other public companies provide him with the qualifications and skills to serve as a director of our company.

Michael F. Giordano, M.D. has served on our board of directors since January 2018. From 1999 to 2017, Dr. Giordano worked at Bristol-Myers Squibb Co., a pharmaceutical company, most recently serving as Senior Vice President and Head of Development of Oncology and Immuno-Oncology. Dr. Giordano also serves on the board of directors of Epizyme, Inc., a biopharmaceutical company. He received an M.D. from Weil Cornell Medical College and a B.A. in Natural Science from Johns Hopkins University. We believe that Dr. Giordano's extensive experience in oncology and immuno-oncology provide him with the qualifications and skills to serve as a director of our company.

David V. Goeddel, Ph.D. has served on our board of directors since April 2015. Dr. Goeddel has been a Managing Partner of The Column Group, LLC, a venture capital partnership, since 2007. Prior to that, he served as Amgen's first Senior Scientific Vice President until May 2006. Dr. Goeddel co-founded Tularik Inc., a biotechnology company, in November 1991 and served as Vice President of Research there until 1996 and Chief Executive Officer from 1996 through 2004. Dr. Goeddel also serves on the board of directors of NGM Biopharmaceuticals, Inc. and Peloton Therapeutics, Inc., both biopharmaceutical companies. Dr. Goeddel obtained a Ph.D. in Biochemistry from the University of Colorado, Boulder and a B.A. in Chemistry from the University of California, San Diego. We believe that Dr. Goeddel's scientific training and experience as a director of other publicly traded and privately held biopharmaceutical companies provide him with the qualifications and skills to serve as a director of our company.

Linda Kozick has served on our board of directors since December 2016. From January 2011 to July 2015, Ms. Kozick served as Head of Immuno-Oncology, Oncology Product and Portfolio Strategy for Opdivo and Yervoy Life Cycle Management at Bristol-Myers Squibb Co. Ms. Kozick obtained an M.B.A. from Chapman University. Ms. Kozick also received an M.S. in Molecular Immunology and a B.S. in Medical Technology from SUNY Upstate Medical University. We believe that Ms. Kozick's experience in the biopharmaceutical industry and her technical training provide her with the qualifications and skills to serve as a director of our company.

Wendye Robbins, ***M.D.*** has served on our board of directors since September 2019. She has served as President and CEO of Blade Therapeutics since August 2016 (and previously held the title of Interim CEO from May 2015 to July 2016). Dr. Robbins has also served as an independent consultant to venture investors in company formation and translational biology. Dr. Robbins has also served on the faculty at Stanford University School of Medicine in the Department of Anesthesia, Perioperative Care, and Pain Medicine since 2004. Dr. Robbins completed her residency in Anesthesiology at Johns Hopkins University School of Medicine, her internship in Internal Medicine at the University of Pennsylvania School of Medicine, and received her fellowship training in Pain Medicine from John Hopkins University School of Medicine. Dr. Robbins received an M.D. from The Medical College of Pennsylvania and a B.S. in Business Administration from the Haas School of Business at the University of California, Berkeley. We believe that Dr. Robbins' extensive experience in the biopharmaceutical industry, her industry expertise and financial knowledge provide her with the qualifications and skills to serve as a director of our company.

Mary Ann Gray, Ph.D. has served on our board of directors since December 2019. Dr. Gray has been President of Gray Strategic Advisors, LLC, a biotechnology strategic planning and advisory firm, since

September 2003. Previously, she served as Senior Analyst and Portfolio Manager of Federated Kaufmann Fund. Prior to Federated, she served as a biotechnology equity research analyst at multiple firms. Earlier in her career, she worked as a senior scientist both at Schering Plough Research and NeoRx Corporation. She has served on the boards of Seneca Biopharma Inc. since July 2019 and Sarepta Therapeutics, Inc. since December 2018, and previously served on the board of many public and private biotech companies including Senomyx, Inc., from September 2010 to December 2018, Juniper Pharmaceuticals, Inc., from March 2016 to August 2019, Galena Biopharma, Inc., from April 2016 to December 2017, TetraLogic Pharmaceuticals Corporation, from November 2014 to December 2016, ACADIA Pharmaceuticals Inc. from April 2005 to June 2016 and Dyax Corp., a biopharmaceutical company, from February 2004 until January 2016. Dr. Gray holds a Bachelor of Science degree from the University of South Carolina, a Ph.D. in pharmacology from the University of Vermont, and completed her post-doctoral work at Northwestern University School of Medicine and at the Yale University School of Medicine.

Family Relationships

There are no family relationships among any of our executive officers or directors.

Composition of Our Board of Directors

Our business and affairs are managed under the direction of our board of directors. We currently have seven directors. The number of directors is fixed by our board of directors, subject to the terms of our amended and restated certificate of incorporation and amended and restated bylaws. Each of our current directors will continue to serve as a director until the election and qualification of his or her successor, or until his or her earlier death, resignation or removal.

Our board of directors may establish the authorized number of directors from time to time by resolution. In accordance with our amended and restated certificate of incorporation, our board of directors is into three classes with staggered three-year terms. At each annual general 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. Our directors are divided among the three classes as follows:

- the Class I directors are Dr. Wong, Dr. Goeddel and Dr. Gray, and their terms will expire at our first annual meeting of stockholders following this offering;
- the Class II directors are Mr. Rieflin and Ms. Kozick, and their terms will expire at our second annual meeting of stockholders following this offering; and
- the Class III directors are Dr. Giordano and Dr. Robbins, and their terms will expire at our third annual meeting of stockholders following this offering.

We expect that 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.

Director Independence

Our board of directors has undertaken a review of the independence of each director. Based on information provided by each director concerning his or her background, employment and affiliations, our board of directors has determined that Dr. Giordano, Dr. Goeddel, Ms. Kozick, Mr. Rieflin, Dr. Robbins and Dr. Gray do not have relationships that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is “independent” as that term is defined under the applicable listing standards. In making these determinations, our board of directors considered the current and

prior relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our shares held by each non-employee director and the transactions described in the section titled "Certain Relationships and Related Party Transactions."

Committees of Our Board of Directors

Our board of directors has established an audit committee, a compensation committee, and a nominating and corporate governance committee. The composition and responsibilities of each of the committees of our board of directors are described below. Members serve on these committees until their resignation or until otherwise determined by our board of directors. Our board of directors may establish other committees as it deems necessary or appropriate from time to time.

Audit Committee

Our audit committee consists of Dr. Mary Ann Gray, William Rieflin and Dr. Wendye Robbins. Our board of directors has determined that each member of the audit committee satisfies the independence requirements under the Nasdaq listing standards and Rule 10A-3(b)(1) of the Exchange Act. The chair of our audit committee is Dr. Gray. Our board of directors has determined that Dr. Gray, Mr. Rieflin and Dr. Robbins are "audit committee financial experts" within the meaning of SEC regulations. Each member of our audit committee can read and understand fundamental financial statements in accordance with applicable listing standards. In arriving at these determinations, our board of directors has examined each audit committee member's scope of experience and the nature of his or her employment.

The primary purpose of the audit committee is to discharge the responsibilities of our board of directors with respect to our corporate accounting and financial reporting processes, systems of internal control and financial statement audits, and to oversee our independent registered public accounting firm. Specific responsibilities of our audit committee include:

- helping our board of directors oversee our corporate accounting and financial reporting processes;
- managing and/or assessing the selection, engagement, qualifications, independence and performance of a qualified firm to serve as the independent registered public accounting firm to audit our financial statements;
- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and the independent accountants, our interim and year-end operating results;
- developing procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- reviewing related party transactions;
- reviewing our policies on risk assessment and risk management;
- reviewing, with our independent registered public accounting firm, our internal quality control procedures, any material issues with such procedures and any steps taken to deal with such issues; and
- pre-approving audit and permissible non-audit services to be performed by the independent registered public accounting firm.

Our audit committee operates under a written charter that satisfies the applicable listing standards of Nasdaq.

Compensation Committee

Our compensation committee consists of Michael Giordano and William Rieflin. The chair of our compensation committee is Dr. Giordano. Our board of directors has determined that each member of the compensation committee satisfies the independence requirements under the listing standards of Nasdaq, and is a "non-employee director" as defined in Rule 16b-3 promulgated under the Exchange Act.

The primary purpose of our compensation committee is to discharge the responsibilities of our board of directors in overseeing our compensation policies, plans and programs and to review and determine the compensation to be paid to our executive officers, directors and other senior management, as appropriate. Specific responsibilities of our compensation committee include:

- reviewing and recommending to our board of directors the compensation of our chief executive officer and other executive officers;
- reviewing and recommending to our board of directors the compensation of our directors;
- administering our equity incentive plans and other benefit programs;
- reviewing, adopting, amending and terminating incentive compensation and equity plans, severance agreements, profit sharing plans, bonus plans, change-of-control protections and any other compensatory arrangements for our executive officers and other senior management; and
- reviewing and establishing general policies relating to compensation and benefits of our employees, including our overall compensation philosophy.

Our compensation committee operates under a written charter that satisfies the applicable listing standards of Nasdaq.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee consists of Linda Kozick and Michael Giordano. The chair of our nominating and corporate governance committee is Ms. Kozick. Our board of directors has determined that each member of the nominating and corporate governance committee satisfies the independence requirements under the listing standards of Nasdaq.

Specific responsibilities of our nominating and corporate governance committee include:

- identifying and evaluating candidates, including the nomination of incumbent directors for reelection and nominees recommended by stockholders, to serve on our board of directors;
- considering and making recommendations to our board of directors regarding the composition and chairs of the board of directors and committees of our board of directors;
- reviewing developments in corporate governance practices;
- developing and making recommendations to our board of directors regarding corporate governance guidelines and matters; and

- overseeing periodic evaluations of the board of directors' performance, including committees of the board of directors.

Our nominating and corporate governance committee operates under a written charter, that satisfies the applicable listing standards of Nasdaq.

Code of Business Conduct and Ethics

We have adopted a code of business conduct and ethics (the "Code of Conduct") 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. Our code of business conduct and ethics is available under the Corporate Governance section of our website at www.rapt.com. In addition, we intend to post on our website all disclosures that are required by law or the listing standards of Nasdaq concerning any amendments to, or waivers from, any provision of the Code of Conduct. 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.

Compensation Committee Interlocks and Insider Participation

None of the members of the compensation committee is currently or has been at any time one of our officers or employees. None of our executive officers currently serves, or has served during the last year, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or compensation committee.

Non-Employee Director Compensation

In September 2019, the board of directors granted a stock option to purchase 32,000 shares of our common stock to Dr. Robbins, at an exercise price per share of $12.00. The shares underlying these options vest in 12 equal monthly installments measured from September 26, 2019, subject to Dr. Robbins continuous service with us as of each vesting date.

In September 2019 and October 2019, the board of directors granted a stock option to purchase 4,166 and 3,333 shares, respectively, of our common stock each to Ms. Kozick and Mr. Rieflin, at an exercise price per share of $13.62 and $12.00 respectively. The shares underlying Ms. Kozick's and Mr. Rieflin's options vest in 12 equal monthly installments measured from December 9, 2018 and April 7, 2019, respectively, subject to their continuous service with us as of each vesting date.

In October 2019, the board of directors granted a stock option to purchase 15,334 shares of our common stock each to Ms. Kozick, Dr. Giordano and Mr. Rieflin, at an exercise price per share of $12.00. The shares underlying these options vest in 12 equal monthly installments measured from October 30, 2019, subject to their continuous service with us as of each vesting date.

In December 2019, the board of directors granted a stock option to purchase 22,500 shares of our common stock to Dr. Gray, at an exercise price per share of $27.53. The shares underlying these options vest in 36 equal monthly installments measured from December 4, 2019, subject to Dr. Gray's continuous service with us as of each vesting date.

In addition, we reimburse all of our non-employee directors for their reasonable out-of-pocket expenses incurred in attending board of directors and committee meetings.

The following table sets forth information regarding the compensation earned by or paid to our non-employee directors during fiscal 2019. The compensation earned by or paid to Dr. Wong as a named

executive officer for fiscal 2018 and 2019 is set forth below under "Executive Compensation—Summary Compensation Table."

Name	Fees Earned or Paid in Cash ($)(1)	Option Awards ($)(2)	Total ($)
William Rieflin	20,625	190,066	210,691
David V. Goeddel, Ph.D.	8,750	—	8,750
Michael F. Giordano, M.D.	12,250	124,921	137,171
Linda Kozick	10,750	189,890	200,640
Wendye Robbins, Ph.D.(3)	11,875	271,376	283,251
Mary Ann Gray(4)	5,000	438,588	443,588
Beth Seidenberg, M.D.(5)	—	—	—

(1) The amounts in this column represent fees for service on the Board of Directors.

(2) The amounts reported represent the aggregate grant date fair value of the stock options granted during fiscal 2019 under our 2015 Plan and 2019 Plan, computed in accordance with Financial Accounting Standard Board Accounting Standards Codification, Topic 718 ("ASC Topic 718"). The assumptions used in calculating the grant-date fair value of the stock options reported in this column are set forth in the notes to our consolidated financial statements included elsewhere in this prospectus. This amount does not reflect the actual economic value that may be realized by the non-employee director. As of December 31, 2019, the aggregate number of option awards outstanding to each of our directors was 31,165 for Mr. Rieflin, 32,000 for Dr. Giordano, 43,665 for Ms. Kozick, 32,000 for Dr. Robbins and 22,500 for Dr. Gray.

(3) Dr. Robbins joined our board in September 2019.

(4) Dr. Gray joined our board in December 2019.

(5) Dr. Seidenberg resigned from our board in June 2019.

Non-Employee Director Compensation Policy

We have adopted a non-employee director compensation policy, pursuant to which our non-employee directors are eligible to receive compensation for service on our board of directors and committees of our board of directors.

Equity Compensation

Initial Grant

Under our non-employee director compensation policy, each new non-employee director who joins our board of directors will automatically receive a nonstatutory stock option to purchase 22,500 shares of common stock under our 2019 Plan. Each initial grant will vest in a series of three successive equal annual installments over the three-year period measured from the date of grant, subject to the non-employee director's continuous service (as defined in our 2019 Plan) through each applicable vesting date.

Annual Grant

On the date of each annual meeting of our stockholders, each continuing non-employee director will automatically receive a nonstatutory stock option to purchase 7,500 shares of common stock under our 2019 Plan. Each annual grant will vest on the earlier of the one year anniversary of the grant date or the day prior to the Company's next annual meeting occurring after the grant date, subject to the non-employee director's continuous service through the vesting date.

Vesting Acceleration

In the event of a change of control (as defined in our 2019 Plan), any unvested portion of an equity award granted under the policy will fully vest immediately prior to the closing of such change of control, subject to the non-employee director's continuous service immediately prior to the closing of the change of control.

Cash Compensation

Our non-employee director compensation policy also provides that each non-employee director receives an annual cash retainer of $35,000 for serving on our board of directors. The chair of our board of directors receives an additional annual cash retainer of $30,000.

The chairs and members of the three committees of our board of directors are entitled to the following additional annual cash retainers:

Board Committee	Chair Fee	Member Fee
Audit Committee	$25,000	$12,500
Compensation Committee	10,000	5,000
Nominating and Corporate Governance Committee	8,000	4,000

All annual cash compensation amounts are payable in equal quarterly installments, in arrears no later than 30 days following the end of each fiscal quarter in which the service occurred, prorated for any partial quarter of service. In lieu of such cash compensation, each director may elect on an annual basis to receive a stock option grant having a Black-Scholes value equal to the amount of cash compensation payable to such director.

EXECUTIVE COMPENSATION

Our named executive officers for fiscal 2019, consisting of our principal executive officer and the next two most highly compensated executive officers, were:

- Brian Wong, M.D., Ph.D., our President and Chief Executive Officer;
- Dirk Brockstedt, Ph.D., our Chief Scientific Officer; and
- Rodney Young, our Chief Financial Officer

Summary Compensation Table

The following table presents all of the compensation awarded to our named executive officers during the 2018 and 2019 fiscal years.

Name and Principal Position	Year	Salary ($)	Bonus ($)	Option Awards ($)(1)	Non-Equity Incentive Plan Compensation(2) ($)	All Other Compensation ($)	Total ($)
Brian Wong, M.D., Ph.D.	2019	484,000	—	1,007,876	110,917	353,951	1,956,744
President and Chief Executive Officer	2018	425,000	—	865,920	119,000	—	1,409,920
Dirk Brockstedt, Ph.D.	2019	360,000	—	369,359	83,475	—	812,834
Chief Scientific Officer							
Rodney Young	2019	32,083	100,000	2,164,134	—	—	2,296,217
Chief Financial Officer							

(1) The amounts disclosed represent the aggregate grant date fair value of the stock options granted to our named executive officers during fiscal 2018 and 2019 under our 2015 Plan, computed in accordance with ASC Topic 718. The assumptions used in calculating the grant date fair value of the stock options are set forth in the notes to our audited consolidated financial statements included elsewhere in this prospectus. This amount does not reflect the actual economic value that may be realized by the named executive officer.

(2) The amount disclosed for fiscal 2018 represents the executive officer's total performance bonus earned for fiscal 2018 as described below under "—Annual Performance-Based Bonus Opportunity." The total performance bonuses earned for fiscal 2019 have not been determined as of the date hereof and will be updated in a subsequent filing.

Annual Performance-Based Bonus Opportunity

Our executive officers are eligible to receive performance-based cash bonuses, which are designed to provide appropriate incentives to our executives to achieve defined performance goals and to reward our executives for individual achievement towards these goals. The performance-based bonus each executive officer is eligible to receive is generally based on the extent to which we achieve the corporate goals that our board or compensation committee establishes and is paid annually. Annually, the compensation committee of our board of directors reviews the company's performance and determines the actual bonus payout to be awarded to each of our eligible executive officers.

Executive Employment Arrangements

Brian Wong

We entered into an employment letter agreement with Dr. Wong, our President and Chief Executive Officer, in July 2019. His employment letter agreement has no specific term and provides that Dr. Wong is an

at-will employee. His employment letter agreement also provides that his annual base salary is $484,000 and that he is eligible for an annual discretionary target bonus equal to 50% of his annual base salary, based on the achievement of individual and corporate performance objectives.

Pursuant to the employment letter agreement with Dr. Wong, if Dr. Wong's employment is terminated outside the 12 month period following a "change in control" either (1) by us without "cause" (and not due to Dr. Wong's death or disability) or (2) by Dr. Wong for "good reason" (as such terms are defined in Dr. Wong's employment letter agreement), then, subject to the preconditions described below, Dr. Wong will be entitled to receive the following payments and benefits: (i) continuing payments of his then-current base salary (or the level in effect before any reduction in base salary that constitutes good reason) for a period of 12 months and (ii) reimbursement of premiums for coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended, or COBRA, for Dr. Wong and his eligible dependents, if any, for up to 12 months, or taxable monthly payments for the equivalent period in the event payment of the COBRA premiums would violate applicable law.

If Dr. Wong's employment is terminated during the 12 month period following a change in control either (1) by us without cause (and not due to Dr. Wong's death or disability) or (2) by Dr. Wong for good reason, then, subject to the preconditions described below, Dr. Wong will be entitled to receive the following payments and benefits: (i) continuing payments of his then-current base salary (or the level in effect before any reduction in base salary that constitutes good reason) for a period of 18 months; (ii) a lump sum cash payment equal to Dr. Wong's annual discretionary target bonus; (iii) reimbursement of premiums for coverage under COBRA, for Dr. Wong and his eligible dependents, if any, for up to 18 months, or taxable monthly payments for the equivalent period in the event payment of the COBRA premiums would violate applicable law; and (iv) accelerated vesting and exercisability of all outstanding equity awards.

The receipt of the severance payments and benefits described above is conditioned on Dr. Wong timely signing and not revoking a release of claims in a form acceptable to us, as well as remaining in compliance with all continuing obligations he owes to us, including those under the confidential information and inventions assignment agreement applicable to Dr. Wong.

Dirk Brockstedt

We entered into an employment letter agreement with Dr. Brockstedt, our Chief Scientific Officer, in July 2019. His employment letter agreement has no specific term and provides that Dr. Brockstedt is an at-will employee. His employment letter agreement also provides that his annual base salary is $360,000 and that he is eligible for an annual discretionary target bonus equal to 40% of his annual base salary, based on the achievement of individual and corporate performance objectives.

Pursuant to the employment letter agreement with Dr. Brockstedt, if Dr. Brockstedt's employment is terminated outside the 12 month period following a "change in control" either (1) by us without "cause" (and not due to Dr. Brockstedt's death or disability) or (2) by Dr. Brockstedt for "good reason" (as such terms are defined in Dr. Brockstedt's employment letter agreement), then, subject to the preconditions described below, Dr. Brockstedt will be entitled to receive the following payments and benefits: (i) continuing payments of his then-current base salary (or the level in effect before any reduction in base salary that constitutes good reason) for a period of 9 months and (ii) reimbursement of premiums for coverage under COBRA, for Dr. Brockstedt and his eligible dependents, if any, for up to 9 months, or taxable monthly payments for the equivalent period in the event payment of the COBRA premiums would violate applicable law.

If Dr. Brockstedt's employment is terminated during the 12 month period following a change in control either (1) by us without cause (and not due to Dr. Brockstedt's death or disability) or (2) by Dr. Brockstedt for good reason, then, subject to the preconditions described below, Dr. Brockstedt will be entitled to receive the following payments and benefits: (i) continuing payments of his then-current base salary (or the level in effect

before any reduction in base salary that constitutes good reason) for a period of 12 months; (ii) a lump sum cash payment equal to Dr. Brockstedt's annual discretionary target bonus; (iii) reimbursement of premiums for coverage under COBRA, for Dr. Brockstedt and his eligible dependents, if any, for up to 12 months, or taxable monthly payments for the equivalent period in the event payment of the COBRA premiums would violate applicable law; and (iv) accelerated vesting and exercisability of all outstanding equity awards.

The receipt of the severance payments and benefits described above is conditioned on Dr. Brockstedt timely signing and not revoking a release of claims in a form acceptable to us, as well as remaining in compliance with all continuing obligations he owes to us, including those under the confidential information and inventions assignment agreement applicable to Dr. Brockstedt.

Rodney Young

We entered into an employment letter agreement with Mr. Young, our Chief Financial Officer, in November 2019. His employment letter agreement has no specific term and provides that Mr. Young is an at-will employee. His employment letter agreement provides for a one-time sign-on bonus of $100,000 and an annual base salary of $385,000. He is also eligible for an annual discretionary target bonus equal to 40% of his annual base salary, based on the achievement of individual and corporate performance objectives.

Pursuant to the employment letter agreement with Mr. Young, if Mr. Young's employment is terminated outside the 12 month period following a "change in control" either (1) by us without "cause" (and not due to Mr. Young's death or disability) or (2) by Mr. Young for "good reason" (as such terms are defined in Mr. Young's employment letter agreement), then, subject to the preconditions described below, Mr. Young will be entitled to receive the following payments and benefits: (i) continuing payments of his then-current base salary (or the level in effect before any reduction in base salary that constitutes good reason) for a period of 9 months and (ii) reimbursement of premiums for coverage under COBRA, for Mr. Young and his eligible dependents, if any, for up to 9 months, or taxable monthly payments for the equivalent period in the event payment of the COBRA premiums would violate applicable law.

If Mr. Young's employment is terminated during the 12 month period following a change in control either (1) by us without cause (and not due to Mr. Young's death or disability) or (2) by Mr. Young for good reason, then, subject to the preconditions described below, Mr. Young will be entitled to receive the following payments and benefits: (i) continuing payments of his then-current base salary (or the level in effect before any reduction in base salary that constitutes good reason) for a period of 12 months; (ii) a lump sum cash payment equal to Mr. Young's annual discretionary target bonus; (iii) reimbursement of premiums for coverage under COBRA, for Mr. Young and his eligible dependents, if any, for up to 12 months, or taxable monthly payments for the equivalent period in the event payment of the COBRA premiums would violate applicable law; and (iv) accelerated vesting and exercisability of all outstanding equity awards.

The receipt of the severance payments and benefits described above is conditioned on Mr. Young timely signing and not revoking a release of claims in a form acceptable to us, as well as remaining in compliance with all continuing obligations he owes to us, including those under the confidential information and inventions assignment agreement applicable to Mr. Young.

Potential Payments upon Termination or Change in Control

Regardless of the manner in which a named executive officer's service terminates, each named executive officer is entitled to receive amounts earned during his or her term of service, including unpaid salary and unused vacation.

Dr. Wong, Dr. Brockstedt and Mr. Young are eligible to receive potential termination or change of control payments pursuant to their employment letter agreements, as described in "—Executive Employment Arrangements—Brian Wong", "—Executive Employment Arrangements—Dirk Brockstedt" and "—Executive Employment Arrangements—Rodney Young"

Outstanding Equity Awards as of December 31, 2019

The following table presents the outstanding equity incentive plan awards held by each named executive officer as of December 31, 2019.

		Option Awards(1)				Stock Awards(1)	
Name	Grant Date	Number of Securities Underlying Unexercised Options Exercisable	Number of Securities Underlying Unexercised Options Unexercisable	Option Exercise Price Per Share ($)	Option Expiration Date	Number of Shares that Have Not Vested (#)	Market Value of Shares that Have Not Vested ($)(2)
Brian Wong, M.D., Ph.D.	3/8/2017	—	—	2.04	3/7/2027	27,092(3)	748,010
	3/28/2018	95,833(4)	104,167(4)	6.18	3/27/2028		
	3/28/2019	—	66,666(5)	6.30	3/27/2029		
	10/30/2019	—	83,333(6)	12.00	10/29/2029		
Dirk Brockstedt, Ph.D.	3/28/2018	37,534(7)	40,799(7)	6.18	3/27/2028		
	3/28/2019	—	28,833(8)	6.30	3/27/2029		
	6/27/2019	—	25,000(9)	13.62	6/26/2029		
Rodney Young	12/2/2019	—	140,000(10)	21.73	12/1/2029		

(1) Each of the equity awards was granted under the 2019 Plan or 2015 Plan, the terms of which plan is described below under "—Equity Incentive Plans."

(2) This amount reflects our common stock closing price of $27.61 as of December 31, 2019 multiplied by the amount shown in the column "Stock Awards—Number of Shares that Have Not Vested."

(3) 25% of the shares subject to the option vested on January 1, 2018, the first anniversary of the vesting commencement date, and the remainder will vest in 36 equal monthly installments thereafter, subject to Dr. Wong's continuous service as of each such vesting date.

(4) 25% of the shares subject to the option vested on January 1, 2019, the first anniversary of the vesting commencement date, and the remainder will vest in 36 equal monthly installments thereafter, subject to Dr. Wong's continuous service as of each such vesting date.

(5) 25% of the shares subject to the option vested on January 1, 2020, the first anniversary of the vesting commencement date, and the remainder will vest in 36 equal monthly installments thereafter, subject to Dr. Wong's continuous service as of each such vesting date.

(6) 25% of the shares subject to the option will vest on October 30, 2020, the first anniversary of the vesting commencement date, and the remainder will vest in 36 equal monthly installments thereafter, subject to Dr. Wong's continuous service as of each such vesting date.

(7) 25% of the shares subject to the option vested on March 28, 2019, the first anniversary of the vesting commencement date, and the remainder will vest in 36 equal monthly installments thereafter, subject to Dr. Brockstedt's continuous service as of each such vesting date.

(8) 25% of the shares subject to the option vested on January 1, 2020, the first anniversary of the vesting commencement date, and the remainder will vest in 36 equal monthly installments thereafter, subject to Dr. Brockstedt's continuous service as of each such vesting date.

(9) 25% of the shares subject to the option will vest on June 27, 2020, the first anniversary of the vesting commencement date, and the remainder will vest in 36 equal monthly installments thereafter, subject to Dr. Brockstedt's continuous service as of each such vesting date.

(10) 25% of the shares subject to the option will vest on December 2, 2020, the first anniversary of the vesting commencement date, and the remainder will vest in 36 equal monthly installments thereafter, subject to Mr. Young's continuous service as of each such vesting date. This option is subject to vesting acceleration on the applicable terms described in "—Potential Payments upon Termination or Change in Control."

Other Compensation and Benefits

Dr. Wong, Dr. Brockstedt and Mr. Young are eligible to participate in our employee benefit plans, including our medical, dental, vision, life, disability and accidental death and dismemberment insurance plans, in each case on the same basis as all of our other employees. We pay the premiums for the life, disability, accidental death and dismemberment insurance for all of our employees, including Dr. Wong, Dr. Brockstedt and Mr. Young. We generally do not provide perquisites or personal benefits to our named executive officers.

Our named executive officers did not participate in, or earn any benefits under, any nonqualified deferred compensation plan sponsored by us during the fiscal year ended December 31, 2019. Our board of directors may elect to provide our officers and other employees with nonqualified deferred compensation benefits in the future if it determines that doing so is in our best interests.

Our named executive officers did not participate in, or otherwise receive any benefits under, any pension or retirement plan sponsored by us during fiscal 2019.

Employee Benefit and Stock Plans

The principal features of our equity incentive plans and 401(k) plan are summarized below. These summaries are qualified in their entirety by reference to the actual text of the plans, which, other than the 401(k) plan, are filed as exhibits to the registration statement of which this prospectus is a part.

2019 Equity Incentive Plan

Our board of directors adopted and our stockholders approved our 2019 Plan, on June 27, 2019, and July 18, 2019, respectively. The 2019 Plan became effective immediately prior to our initial public offering.

Stock Awards. The 2019 Plan provides for the grant of incentive stock options ("ISOs"), within the meaning of Section 422 of the Code, nonstatutory stock options ("NSOs"), stock appreciation rights, restricted stock awards, restricted stock unit awards, performance-based stock awards, and other forms of equity compensation, which are collectively referred to as stock awards. Additionally, the 2019 Plan provides for the grant of performance cash awards. ISOs may be granted only to our employees and to any of our parent or subsidiary corporation's employees. All other awards may be granted to employees, including officers, and to non-employee directors and consultants of ours and any of our affiliates.

Share Reserve. Initially, the aggregate number of shares of our common stock that may be issued pursuant to stock awards under the 2019 Plan is the sum of (i) 1,786,166 new shares plus (ii) the number of shares reserved, and remaining available for issuance, under our 2015 Plan at the time our 2019 Plan became effective and (iii) the number of shares subject to stock options or other stock awards granted under our 2015 Plan that would have otherwise returned to our 2015 Plan (such as upon the expiration or termination of a stock award prior to vesting). The number of shares of our common stock reserved for issuance under our 2019 Plan will automatically increase on January 1 of each year, beginning on January 1, 2020 and continuing through and including January 1, 2029, by 4% of the total number of shares of our capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our board of directors. The maximum number of shares that may be issued upon the exercise of ISOs under our 2019 Plan is 10,445,457 shares.

If a stock award granted under the 2019 Plan expires or otherwise terminates without being exercised in full, or is settled in cash, the shares of our common stock not acquired pursuant to the stock award again will become available for subsequent issuance under the 2019 Plan. In addition, the following types of shares under the 2019 Plan may become available for the grant of new stock awards under the 2019 Plan: (1) shares that are forfeited to or repurchased by us prior to becoming fully vested; (2) shares withheld to satisfy income or employment withholding taxes; or (3) shares used to pay the exercise or purchase price of a stock award. Shares issued under the 2019 Plan may be previously unissued shares or reacquired shares bought by us on the open market.

The maximum number of shares of common stock subject to stock awards granted under the 2019 Plan or otherwise during any one calendar year to any non-employee director, taken together with any cash fees paid by us to such non-employee director during such calendar year for service on the board of directors, will not exceed $750,000 in total value (calculating the value of any such stock awards based on the grant date fair value of such stock awards for financial reporting purposes), or, with respect to the calendar year in which a non-employee director is first appointed or elected to our board of directors, $1,000,000.

Administration. Our board of directors, or a duly authorized committee thereof, has the authority to administer the 2019 Plan. Our board of directors may also delegate to one or more of our officers the authority to (1) designate employees (other than other officers) to be recipients of certain stock awards, (2) determine the number of shares of common stock to be subject to such stock awards and (3) specify the other terms and conditions, including the strike price or purchase price and vesting schedule, applicable to such awards. Subject to the terms of the 2019 Plan, our board of directors or the authorized committee, referred to as the plan administrator, determines recipients, dates of grant, the numbers and types of stock awards to be granted and the terms and conditions of the stock awards, including the period of their exercisability and the vesting schedule applicable to a stock award. Subject to the limitations set forth below, the plan administrator will also determine the exercise price, strike price or purchase price of stock awards granted and the types of consideration to be paid for the stock award.

The plan administrator has the authority to modify outstanding stock awards under our 2019 Plan. Subject to the terms of our 2019 Plan, the plan administrator has the authority, without stockholder approval, to reduce the exercise, purchase or strike price of any outstanding stock award, cancel any outstanding stock award in exchange for new stock awards, cash or other consideration, or take any other action that is treated as a repricing under generally accepted accounting principles, with the consent of any adversely affected participant.

Stock Options. ISOs and NSOs are evidenced by stock option agreements adopted by the plan administrator. The plan administrator determines the exercise price for a stock option, within the terms and conditions of the 2019 Plan, provided that the exercise price of a stock option generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Options granted under the 2019 Plan vest at the rate specified by the plan administrator.

The plan administrator determines the term of stock options granted under the 2019 Plan, up to a maximum of 10 years. Unless the terms of an option holder's stock option agreement provide otherwise, if an option holder's service relationship with us, or any of our affiliates, ceases for any reason other than disability, death or cause, the option holder may generally exercise any vested options for a period of three months following the cessation of service. The option term will automatically be extended in the event that exercise of the option following such a termination of service is prohibited by applicable securities laws or our insider trading policy. If an option holder's service relationship with us or any of our affiliates ceases due to disability or death, or an option holder dies within a certain period following cessation of service, the option holder or a beneficiary may generally exercise any vested options for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, options generally terminate immediately. In no event may an option be exercised beyond the expiration of its term.

Acceptable consideration for the purchase of common stock issued upon the exercise of a stock option will be determined by the plan administrator and may include (1) cash, check, bank draft or money order, (2) a broker-assisted cashless exercise, (3) the tender of shares of our common stock previously owned by the option holder, (4) a net exercise of the option if it is an NSO and (5) other legal consideration approved by the plan administrator.

Unless the plan administrator provides otherwise, options generally are not transferable except by will, the laws of descent and distribution, or pursuant to a domestic relations order. An option holder may designate a beneficiary, however, who may exercise the option following the option holder's death.

Tax Limitations on ISOs. The aggregate fair market value, determined at the time of grant, of our common stock with respect to ISOs that are exercisable for the first time by an option holder during any calendar year under all of our stock plans may not exceed $100,000. Options or portions thereof that exceed such limit will be treated as NSOs. No ISOs may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our parent or subsidiary corporations unless (1) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant and (2) the term of the ISO does not exceed five years from the date of grant.

Restricted Stock Awards. Restricted stock awards are evidenced by restricted stock award agreements adopted by the plan administrator. Restricted stock awards may be granted in consideration for (1) cash, check, bank draft or money order, (2) services rendered to us or our affiliates or (3) any other form of legal consideration. Common stock acquired under a restricted stock award may, but need not, be subject to a share repurchase option in our favor in accordance with a vesting schedule as determined by the plan administrator. Rights to acquire shares under a restricted stock award may be transferred only upon such terms and conditions as set by the plan administrator. Except as otherwise provided in the applicable award agreement, restricted stock awards that have not vested will be forfeited upon the participant's cessation of continuous service for any reason.

Restricted Stock Unit Awards. Restricted stock unit awards are evidenced by restricted stock unit award agreements adopted by the plan administrator. Restricted stock unit awards may be granted in consideration for any form of legal consideration or for no consideration. A restricted stock unit award may be settled by cash, delivery of stock, a combination of cash and stock as deemed appropriate by the plan administrator, or in any other form of consideration set forth in the restricted stock unit award agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit award. Rights under a restricted stock unit award may be transferred only upon such terms and conditions as set by the plan administrator. Restricted stock unit awards may be subject to vesting as determined by the plan administrator. Except as otherwise provided in the applicable award agreement, restricted stock units that have not vested will be forfeited upon the participant's cessation of continuous service for any reason.

Stock Appreciation Rights. Stock appreciation rights are evidenced by stock appreciation grant agreements adopted by the plan administrator. The plan administrator determines the strike price for a stock appreciation right, which generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Upon the exercise of a stock appreciation right, we will pay the participant an amount in cash or stock equal to (1) the excess of the per share fair market value of our common stock on the date of exercise over the strike price, multiplied by (2) the number of shares of common stock with respect to which the stock appreciation right is exercised. A stock appreciation right granted under the 2019 Plan vests at the rate specified in the stock appreciation right agreement as determined by the plan administrator.

The plan administrator determines the term of stock appreciation rights granted under the 2019 Plan, up to a maximum of 10 years. Unless the terms of a participant's stock appreciation right agreement provides otherwise, if a participant's service relationship with us or any of our affiliates ceases for any reason other than cause, disability or death, the participant may generally exercise any vested stock appreciation right for a period of three months following the cessation of service. The stock appreciation right term will be further extended in the event that exercise of the stock appreciation right following such a termination of service is prohibited by applicable securities laws. If a participant's service relationship with us, or any of our affiliates, ceases due to disability or death, or a participant dies within a certain period following cessation of service, the participant or a beneficiary may generally exercise any vested stock appreciation right for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, stock appreciation rights generally terminate immediately upon the occurrence of the event giving rise to the termination of the individual for cause. In no event may a stock appreciation right be exercised beyond the expiration of its term.

Unless the plan administrator provides otherwise, stock appreciation rights generally are not transferable except by will, the laws of descent and distribution, or pursuant to a domestic relations order. A stock

appreciation right holder may designate a beneficiary, however, who may exercise the stock appreciation right following the holder's death.

Performance Awards. Our 2019 Plan permits the grant of performance-based stock and cash awards. The performance goals that may be selected include one or more of the following: (1) earnings (including earnings per share and net earnings); (2) earnings before interest, taxes and depreciation; (3) earnings before interest, taxes, depreciation and amortization; (4) earnings before interest, taxes, depreciation, amortization and legal settlements; (5) earnings before interest, taxes, depreciation, amortization, legal settlements and other income (expense); (6) earnings before interest, taxes, depreciation, amortization, legal settlements, other income (expense) and stock-based compensation; (7) earnings before interest, taxes, depreciation, amortization, legal settlements, other income (expense), stock-based compensation and changes in deferred revenue; (8) total stockholder return; (9) return on equity or average stockholder's equity; (10) return on assets, investment, or capital employed; (11) stock price; (12) margin (including gross margin); (13) income (before or after taxes); (14) operating income; (15) operating income after taxes; (16) pre-tax profit; (17) operating cash flow; (18) sales or revenue targets; (19) increases in revenue or product revenue; (20) expenses and cost reduction goals; (21) improvement in or attainment of working capital levels; (22) economic value added (or an equivalent metric); (23) market share; (24) cash flow; (25) cash flow per share; (26) share price performance; (27) debt reduction; (28) implementation or completion of projects or processes; (29) stockholders' equity; (30) capital expenditures; (31) debt levels; (32) operating profit or net operating profit; (33) workforce diversity; (34) growth of net income or operating income; (35) billings; (36) bookings; (37) employee retention; (38) user satisfaction; (39) the number of users, including unique users; (40) budget management; (41) partner satisfaction; (42) entry into or completion of strategic partnerships or transactions (including in-licensing and out-licensing of intellectual property); and (43) other measures of performance selected by our board of directors or a committee thereof.

The performance goals may be based on company-wide performance or performance of one or more business units, divisions, affiliates, or business segments, and may be either absolute or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise in the award agreement at the time the award is granted or in such other document setting forth the performance goals at the time the goals are established, we will appropriately make adjustments in the method of calculating the attainment of performance goals as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects; (3) to exclude the effects of changes to generally accepted accounting principles; (4) to exclude the effects of any statutory adjustments to corporate tax rates; (5) to exclude the effects of any items that are unusual in nature or occur infrequently as determined under generally accepted accounting principles; (6) to exclude the dilutive effects of acquisitions or joint ventures; (7) to assume that any business divested by us achieved performance objectives at targeted levels during the balance of a performance period following such divestiture; (8) to exclude the effect of any change in the outstanding shares of our common stock by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends; (9) to exclude the effects of stock-based compensation and the award of bonuses under our bonus plans; (10) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to be expensed under generally accepted accounting principles; (11) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under generally accepted accounting principles; and (12) to exclude the effect of any other unusual, nonrecurring gain or loss or other extraordinary item. In addition, we retain the discretion to adjust or eliminate the compensation or economic benefit due upon attainment of the goals. The performance goals may differ from participant to participant and from award to award.

Other Stock Awards. The plan administrator may grant other awards based in whole or in part by reference to our common stock. The plan administrator will set the number of shares under the stock award and all other terms and conditions of such awards.

Changes to Capital Structure. If there is a specified type of change in our capital structure, such as a stock split or recapitalization, appropriate adjustments will be made to (1) the class and maximum number of shares reserved for issuance under the 2019 Plan, (2) the class and maximum number of shares by which the share reserve may increase automatically each year, (3) the class and number of shares that may be issued upon the exercise of ISOs and (4) the class and number of shares and exercise price, strike price, or purchase price, if applicable, of all outstanding stock awards.

Corporate Transactions. In the event of certain specified significant corporate transactions, the plan administrator has the discretion to take any of the following actions with respect to stock awards:

- arrange for the assumption, continuation or substitution of a stock award by a surviving or acquiring entity or parent company;
- arrange for the assignment of any reacquisition or repurchase rights held by us to the surviving or acquiring entity or parent company;
- accelerate the vesting of the stock award and provide for its termination prior to the effective time of the corporate transaction;
- arrange for the lapse of any reacquisition or repurchase right held by us;
- cancel or arrange for the cancellation of the stock award in exchange for such cash consideration, if any, as our board of directors may deem appropriate; or
- make a payment equal to the excess of (1) the value of the property the participant would have received upon exercise of the stock award over (2) the exercise price or strike price otherwise payable in connection with the stock award.

Our plan administrator is not obligated to treat all stock awards, even those that are of the same type, in the same manner.

Under the 2019 Plan, a significant corporate transaction is generally the consummation of (1) a sale or other disposition of all or substantially all of our consolidated assets, (2) a sale or other disposition of at least 50% of our outstanding securities, (3) a merger, consolidation or similar transaction following which we are not the surviving corporation or (4) a merger, consolidation or similar transaction following which we are the surviving corporation but the shares of our common stock outstanding immediately prior to such transaction are converted or exchanged into other property by virtue of the transaction.

Change in Control. The plan administrator may provide, in an individual award agreement or in any other written agreement between a participant and us that the stock award will be subject to additional acceleration of vesting and exercisability or settlement in the event of a change in control. Under the 2019 Plan, a change in control is generally (1) the acquisition by a person or entity of more than 50% of our combined voting power other than by merger, consolidation or similar transaction, (2) a consummated merger, consolidation or similar transaction immediately after which our stockholders do not own more than 50% of the combined voting power of the surviving entity (or its parent company), (3) a consummated sale, lease or exclusive license or other disposition of all or substantially all of our consolidated assets and (4) certain dissolutions, liquidations and changes in the board of directors.

Amendment and Termination. Our board of directors has the authority to amend, suspend or terminate our 2019 Plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent and provided further that certain types of amendments will require the approval of our stockholders. No ISOs may be granted after the tenth anniversary of the date our board of directors adopts our 2019 Plan.

2019 Employee Stock Purchase Plan

Our board of directors adopted our ESPP on June 27, 2019 and our stockholders approved the ESPP on July 18, 2019. The ESPP became effective immediately prior to our initial public offering.

The purpose of the ESPP is to secure the services of new employees, to retain the services of existing employees and to provide incentives for such individuals to exert maximum efforts toward our success and that of our affiliates. The ESPP is intended to qualify as an "employee stock purchase plan" within the meaning of Section 423 of the Code.

Share Reserve. The number of shares of our common stock that may be issued under our ESPP as of December 31, 2019 is 240,336 shares of our common stock pursuant to purchase rights granted to our employees or to employees of any of our designated affiliates. The number of shares of our common stock reserved for issuance will automatically increase on January 1 of each calendar year, from January 1, 2020 through January 1, 2029, by the lesser of (1) 1% of the total number of shares of our common stock outstanding on December 31 of the preceding calendar year, and (2) 240,336 shares; provided, that prior to the date of any such increase, our board of directors may determine that such increase will be less than the amount set forth in clauses (1) and (2).

Administration. Our board of directors intends to delegate concurrent authority to administer the ESPP to our compensation committee. The ESPP is implemented through a series of offerings under which eligible employees are granted purchase rights to purchase shares of our common stock on specified dates during such offerings. Under the ESPP, we may specify offerings with durations of not more than 27 months and may specify shorter purchase periods within each offering. Each offering will have one or more purchase dates on which shares of our common stock will be purchased for employees participating in the offering. An offering under the ESPP may be terminated under certain circumstances.

Payroll Deductions. Generally, all regular employees, including executive officers, employed by us or by any of our designated affiliates, may participate in the ESPP and may contribute, normally through payroll deductions, up to 15% of their earnings (as defined in the ESPP) for the purchase of our common stock under the ESPP. Unless otherwise determined by our board of directors, common stock will be purchased for the accounts of employees participating in the ESPP at a price per share equal to the lower of (a) 85% of the fair market value of a share of our common stock on the first trading date of an offering or (b) 85% of the fair market value of a share of our common stock on the date of purchase.

Limitations. Employees may have to satisfy one or more of the following service requirements before participating in the ESPP, as determined by our board of directors, including: (1) being customarily employed for more than 20 hours per week; (2) being customarily employed for more than five months per calendar year; or (3) continuous employment with us or one of our affiliates for a period of time (not to exceed two years). No employee may purchase shares under the ESPP at a rate in excess of $25,000 worth of our common stock based on the fair market value per share of our common stock at the beginning of an offering for each year such a purchase right is outstanding. Finally, no employee will be eligible for the grant of any purchase rights under the ESPP if immediately after such rights are granted, such employee has voting power over 5% or more of our outstanding capital stock measured by vote or value pursuant to Section 424(d) of the Code.

Changes to Capital Structure. If there occurs a change in our capital structure through such actions as a stock split, merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or similar transaction, the board of directors will make appropriate adjustments to (1) the number of shares reserved under the ESPP, (2) the maximum number of shares by which the share reserve may increase automatically each year, (3) the number of shares and purchase price of all outstanding purchase rights and (4) the number of shares that are subject to purchase limits under ongoing offerings.

Corporate Transactions. In the event of certain significant corporate transactions, including (1) a sale of all or substantially all of our assets, (2) the sale or disposition of 50% of our outstanding securities, (3) the consummation of a merger or consolidation where we do not survive the transactions and (4) the consummation of a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding immediately prior to such transaction are converted or exchanged into other property by virtue of the transaction, any then-outstanding rights to purchase our stock under the ESPP may be assumed, continued or substituted for by any surviving or acquiring entity (or its parent company). If the surviving or acquiring entity (or its parent company) elects not to assume, continue or substitute for such purchase rights, then the participants' accumulated payroll contributions will be used to purchase shares of our common stock within ten business days prior to such corporate transaction, and such purchase rights will terminate immediately.

ESPP Amendments, Termination. Our board of directors has the authority to amend or terminate our ESPP, provided that except in certain circumstances such amendment or termination may not materially impair any outstanding purchase rights without the holder's consent. We will obtain stockholder approval of any amendment to our ESPP, as required by applicable law or listing requirements.

2015 Stock Plan

Our board of directors adopted and our stockholders approved our 2015 Plan in April 2015. Our 2015 Plan has been periodically amended, most recently in December 2018. Our 2015 Plan terminated as of October 30, 2019, and we will not grant any additional awards under our 2015 Plan. However, our 2015 Plan will continue to govern the terms and conditions of the outstanding awards previously granted thereunder.

As of September 30, 2019, stock options covering 943,610 shares of our common stock with a weighted-average exercise price of $6.82 per share were outstanding. Any shares of our common stock remaining available for issuance under our 2015 Plan when our 2019 Plan became effective has become available for issuance under our 2019 Plan. In addition, any shares subject to options granted under our 2015 Plan that expire or terminate prior to exercise or are withheld to satisfy tax withholding obligations related to the option or the exercise price of the option, were added to the number of shares available for issuance under our 2019 Plan.

Administration. Our board of directors or a committee delegated by our board of directors administers our 2015 Plan. Subject to the terms of our 2015 Plan, the administrator has the authority and discretion to take any actions it deems necessary or advisable for the administration of our 2015 Plan, including modifying outstanding options or cancelling outstanding options in return for a new option or a different type of award for the same or a different number of shares and at the same or a different exercise price (if applicable).

Options. The exercise price per share of all options granted under our 2015 Plan must be at least 100% of the fair market value per share of our common stock on the grant date. The term of an option may not exceed ten years. An incentive stock option to be granted to an employee who owns more than 10% of the total combined voting power of all classes of our stock or any of our parent or subsidiary corporations may not have a term exceeding five years and must have a per share exercise price of at least 110% of the fair market value per share of our common stock on the grant date. After the termination of service of an employee, director or consultant, he or she may exercise his or her option for the period of time stated in his or her option agreement. In the absence of a specified time in an option agreement, if termination is due to death or disability, the option will remain exercisable for twelve months or six months, respectively. In all other cases, in the absence of a specified time in an option agreement, the option will remain exercisable for three months following the termination of service. An option may not be exercised later than the expiration of its term. Subject to the provisions of our 2015 Plan, the administrator determines the other terms of options, including any vesting and exercisability requirements and the method of payment of the option exercise price.

Changes to Capital Structure. In the event there is a specified type of change in our capital structure, such as a subdivision, combination or consolidation of our outstanding stock, appropriate adjustments will be

made to the number and kind of shares covered by and the exercise price of each outstanding option granted under our 2015 Plan.

Corporate Transactions. In the event we are a party to a merger or consolidation, or in the event of a sale of all or substantially all of our stock or assets, each outstanding option will be treated as our board of directors determines, which treatment may include one or more of the following:

- continuation, assumption, or substitution of the option by the surviving corporation or the parent of the surviving corporation;
- cancellation of the option and a payment to the optionholder with respect to each share subject to the vested portion of the option as of the transaction date equal to the excess of (i) the value, as determined by our board of directors, of the property (including cash) received by the holder of a share of our common stock as a result of the transaction over (ii) the per share exercise price of the option;
- cancellation of the option without the payment of any consideration, provided the optionholder must be notified of such treatment and given at least five business days preceding the effective date of the transaction to exercise his or her option to the extent vested (unless a shorter period is required to permit a timely closing of the transaction and such shorter period still offers the optionholder a reasonable opportunity to exercise his or her option);
- suspension of the optionholder's right to exercise his or her option during a limited period of time preceding the closing of the transaction if such suspension is administratively necessary to permit the closing of the transaction;
- termination of any right the optionholder has to exercise the option prior to vesting in the shares subject to the option; or
- acceleration of the vesting and exercisability of the option.

Our board of directors is not obligated to treat all options in the same manner.

Plan Amendment or Termination. Our board of directors may amend, suspend or terminate our 2019 Plan at any time. To the extent required by applicable law, any amendment to our 2019 Plan will be subject to stockholder approval. The termination or amendment of our 2019 Plan may not affect any option previously granted under our 2019 Plan or 2015 Plan. As discussed above, we terminated our 2015 Plan as of October 30, 2019 and no new awards will be granted thereunder.

401(k) Plan

We maintain a 401(k) plan that provides eligible U.S. employees with an opportunity to save for retirement on a tax advantaged basis. Eligible employees are able to defer eligible compensation up to certain Code limits, which are updated annually. We have the ability to make matching and discretionary contributions to the 401(k) plan. Currently, we do not make matching contributions or discretionary contributions to the 401(k) plan. The 401(k) plan is intended to be qualified under Section 401(a) of the Code, with the related trust intended to be tax exempt under Section 501(a) of the Code. As a tax-qualified retirement plan, contributions to the 401(k) plan are deductible by us when made, and contributions and earnings on those amounts are not generally taxable to the employees until withdrawn or distributed from the 401(k) plan.

Limitations of Liability and Indemnification Matters

Our amended and restated certificate of incorporation contains provisions that limit the liability of our current and former directors for monetary damages to the fullest extent permitted by Delaware law. Delaware

law provides that directors of a corporation will not be personally liable for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to the corporation or its stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions; or
- any transaction from which the director derived an improper personal benefit.

Such limitation of liability does not apply to liabilities arising under federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission.

Our amended and restated certificate of incorporation authorizes us to indemnify our directors, officers, employees and other agents to the fullest extent permitted by Delaware law. Our amended and restated bylaws provide that we are required to indemnify our directors and officers to the fullest extent permitted by Delaware law and may indemnify our other employees and agents. Our amended and restated bylaws provide that, on satisfaction of certain conditions, we will advance expenses incurred by a director or officer in advance of the final disposition of any action or proceeding, and permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in that capacity regardless of whether we would otherwise be permitted to indemnify him or her under the provisions of Delaware law. We have entered and expect to continue to enter into agreements to indemnify our directors and executive officers. With certain exceptions, these agreements provide for indemnification for related expenses including attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in connection with any action, proceeding or investigation. We believe that these amended and restated certificate of incorporation and amended and restated bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. We also maintain customary directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted for directors, executive officers or persons controlling us, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Other than compensation arrangements for our directors and executive officers, which are described elsewhere in this prospectus, below we describe transactions since January 1, 2017 and each currently proposed transaction in which:

- we have been or are to be a participant;
- the amounts involved exceeded or will exceed $120,000; and
- any of our directors, executive officers or holders of more than 5% of our outstanding capital stock, or any immediate family member of, or person sharing the household with, any of these individuals or entities, had or will have a direct or indirect material interest.

Equity and other compensation, termination, change in control and other arrangements are described in the section titled “Executive compensation.” We also describe below certain other transactions with our directors, executive officers and stockholders.

Preferred Stock Financings

Series C Convertible Preferred Stock Financing

In December 2017, we issued and sold to investors in a private placement 13,054,679 shares of our Series C convertible preferred stock at a purchase price of $2.2925 per share for aggregate gross proceeds of approximately $30 million. In June 2018, we sold an additional 13,054,684 shares of Series C convertible preferred stock at a purchase price of $2.2925 per share for aggregate gross proceeds of approximately $30 million. Upon the closing of our initial public offering in November 2019, all shares of our Series C convertible preferred stock automatically converted into our common stock on a 1-for-6 basis.

The following table summarizes the Series C convertible preferred stock purchased by directors, executive officers, beneficial owners of more than 5% of our capital stock (on an as-converted basis) or any member of the immediate family of any of the foregoing persons.

Participants	Series C preferred stock	Total purchase price
5% or greater stockholders and directors(1)		
Entities affiliated with The Column Group, LLC(2)	13,086,150	$ 30,000,000
Entities affiliated with Topspin Fund, LP(3)	2,181,025	$ 5,000,000
KPCB Holdings, Inc., as nominee	2,181,025	$ 5,000,000
The Regents of the University of California	2,085,500	$ 4,781,009

(1) Additional details regarding these stockholders and their equity holdings are provided in this prospectus under the caption “Principal Stockholders.”

(2) Entities affiliated with The Column Group, LLC holding our securities whose shares are aggregated for purposes of reporting share ownership information include The Column Group, LP, The Column Group II, LP, Ponoi Capital, LP and Ponoi Capital II, LP. David V. Goeddel, a member of our board of directors, is a Managing Partner at The Column Group, LLC and a managing member of Ponoi Management, LLC, general partner of Ponoi Capital, LP, and a managing member of Ponoi II Management, LLC, general partner of Ponoi Capital II, LP.

(3) Entities affiliated with Topspin Fund, LP holding our securities whose shares are aggregated for purposes of reporting share ownership information include Topspin Fund, LP and Topspin Biotech Fund II, LP.

Series C-2 Convertible Preferred Stock Financing

In December 2018, we issued and sold to investors in a private placement 9,873,412 shares of our Series C-2 convertible preferred stock at a purchase price of $2.2925 per share for aggregate gross proceeds of approximately $22.6 million. Between January 2019 and June 2019, we sold additional 6,311,445 shares of Series C-2 convertible preferred stock at a purchase price of $2.2925 per share for aggregate gross proceeds of approximately $14.5 million. Upon the closing of our initial public offering in November 2019, all shares of our Series C-2 convertible preferred stock automatically converted into our common stock on a 1-for-6 basis.

The following table summarizes the Series C-2 convertible preferred stock purchased by directors, executive officers, beneficial owners of more than 5% of our capital stock (on an as-converted basis) or any member of the immediate family of any of the foregoing persons.

Participants	Series C-2 preferred stock	Total purchase price
5% or greater stockholders and directors(1)		
The Regents of the University of California	967,935	$ 2,218,991
KPCB Holdings, Inc., as nominee	872,410	$ 2,000,000
Entities affiliated with The Column Group, LLC(2)	1,744,820	$ 4,000,000

(1) Additional details regarding these stockholders and their equity holdings are provided in this prospectus under the caption “Principal Stockholders.”

(2) Entities affiliated with The Column Group, LLC holding our securities whose shares are aggregated for purposes of reporting share ownership information include The Column Group, LP, The Column Group II, LP, Ponoi Capital, LP and Ponoi Capital II, LP. David V. Goeddel, a member of our board of directors, is a Managing Partner at The Column Group, LLC and a managing member of Ponoi Management, LLC, general partner of Ponoi Capital, LP, and a managing member of Ponoi II Management, LLC, general partner of Ponoi Capital II, LP.

Investor Rights Agreement

We are party to an amended and restated investor rights agreement (“IRA”) with certain holders of our capital stock, including the holders of more than 5% of our outstanding capital stock, such as entities affiliated with KPCB Holdings, Inc., as nominee, entities affiliated with The Column Group, LLC, entities affiliated with Topspin Fund, LP, and The Regents of the University of California. The IRA provides the holders of our convertible preferred stock as of immediately prior to our initial public offering with certain registration rights, including the right to demand that we file a registration statement or request that their shares be covered by a registration statement that we are otherwise filing. The IRA also provides these stockholders with information rights, which terminated on the closing of our initial public offering, and a right of first refusal with regard to certain issuances of our capital stock, which will not apply to the shares issued pursuant to this offering and which terminated on the closing of our initial public offering. The holders of up to 17,467,184 shares of our common stock, as of September 30, 2019, are entitled to rights with respect to the registration of their shares under the Securities Act under this agreement, which have been waived in connection with this offering. For a description of these registration rights, see the section titled “Description of Capital Stock—Registration Rights.”

Indemnification Agreements

Our amended and restated certificate of incorporation contains provisions limiting the liability of directors, and our amended and restated bylaws provide that we will indemnify each of our directors and officers to the fullest extent permitted under Delaware law. Our amended and restated certificate of incorporation and amended and restated bylaws also provide our board of directors with discretion to indemnify our employees and other agents when determined appropriate by the board.

In addition, we have entered into an indemnification agreement with each of our directors and executive officers, which requires us to indemnify them. For more information regarding these agreements, see the section titled "Executive Compensation—Limitations of Liability and Indemnification Matters."

Stock Option Grants to Directors and Executive Officers

We have granted stock options to our directors and executive officers, as more fully described in the section titled "Executive Compensation."

Executive Loans

In August 2015, we loaned Dr. Wong, our President and Chief Executive Officer, $336,600 in connection with his exercise of options to purchase 330,000 shares of our common stock. The loan was evidenced by a limited recourse promissory note, which accrued interest at the rate of 1.82% per annum and was secured by a pledge of such exercised shares. In June 2019, the Company forgave $353,951, which was the entire amount of principal and accrued interest due on the note, from Dr. Wong.

In June 2016, we loaned Ms. Hemrajani, our then Chief Operating Officer, $255,000 in connection with her exercise of options to purchase 124,999 shares of our common stock. The loan was evidenced by a limited recourse promissory note, which accrued interest at the rate of 1.41% per annum and was secured by a pledge of such exercised shares. $17,000 of the note was repaid in connection with our repurchase of 8,333 shares of common stock from her trust in February 2018, and an additional $109,437.84 of the note was repaid in connection with our repurchase of 53,649 shares of common stock from her trust in March 2019. In June 2019, the Company repurchased 29,686 vested shares from Ms. Hemrajani in exchange for canceling $65,230 of principal and interest on the promissory note. The Company received cash proceeds of $73,005 for the remaining 33,333 vested shares issued to Ms. Hemrajani.

Policies and Procedures for Related Person Transactions

Our board of directors has adopted a related person transaction policy setting forth the policies and procedures for the identification, review and approval or ratification of related person transactions. This policy covers, 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 and a related person were or will be participants and the amount involved exceeds $120,000, including purchases of goods or services by or from the related person or entities in which the related person has a material interest, indebtedness and guarantees of indebtedness. In reviewing and approving any such transactions, our audit committee will consider all relevant facts and circumstances as appropriate, such as the purpose of the transaction, the availability of other sources of comparable products or services, whether the transaction is on terms comparable to those that could be obtained in an arm's length transaction, management's recommendation with respect to the proposed related person transaction, and the extent of the related person's interest in the transaction.

PRINCIPAL STOCKHOLDERS

The following table sets forth information with respect to the beneficial ownership of our capital stock as of December 31, 2019, as adjusted to reflect the sale of our common stock offered by us in this offering assuming no exercise of the underwriters' option to purchase additional shares, for:

- each of our named executive officers;
- each of our directors;
- all of our executive officers and directors as a group; and
- each person or group of affiliated persons known by us to beneficially own more than 5% of our common stock.

We have determined beneficial ownership in accordance with the rules and regulations of the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Except as indicated by the footnotes below, we believe, based on information furnished to us, that the persons and entities named in the table below have sole voting and sole investment power with respect to all shares that they beneficially own, subject to applicable community property laws.

Applicable percentage ownership before the offering is based on 21,833,037 shares of common stock outstanding as of December 31, 2019. Applicable percentage ownership after the offering is based on 24,333,037 shares of common stock outstanding immediately after the closing of this offering, assuming no exercise by the underwriters of their option to purchase additional shares of our common stock. In computing the number of shares beneficially owned by a person and the percentage ownership of such person, we deemed to be outstanding all shares subject to options held by the person that are currently exercisable, or exercisable within 60 days of December 31, 2019. However, except as described above, we did not deem such shares outstanding for the purpose of computing the percentage ownership of any other person.

Unless otherwise indicated, the address of each beneficial owner listed below is c/o RAPT Therapeutics, Inc., 561 Eccles Avenue, South San Francisco, California 94080. We believe, based on information provided to us, that each of the stockholders listed below 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.

	Shares Beneficially Owned Prior to Offering		Shares Beneficially Owned After the Offering	
Name of Beneficial Owner	Number	Percentage	Number	Percentage
5% Stockholders				
Entities affiliated with The Column Group, LLC(1)	6,777,151	31.0%	6,777,151	27.9%
KPCB Holdings, Inc., as nominee(2)	3,547,063	16.2%	3,547,063	14.6%
Entities affiliated with Topspin Fund, LP(3)	2,575,371	11.8%	2,575,371	10.6%
The Regents of the University of California(4)	1,342,237	6.1%	1,342,237	5.5%
Directors and Named Executive Officers				
Brian Wong(5)	602,221	2.7%	602,221	2.5%
Dirk Brockstedt(6)	48,471	*	48,471	*
Rodney Young	—	*	—	*
David V. Goeddel(1)	6,777,151	31.0%	6,777,151	27.9%
Linda Kozick(7)	28,146	*	28,146	*
Michael F. Giordano(8)	13,791	*	13,791	*
Mary Ann Gray	—	*	—	*
William Rieflin(9)	102,156	*	102,156	*
Wendye Robbins(10)	5,283	*	5,283	*
All directors and executive officers as a group (10 persons)(11)	7,656,386	34.7%	7,656,386	31.2%

* Represents beneficial ownership of less than 1%.

(1) Consists of (i) 50,000 shares held of record by The Column Group II Management, LP, (ii) 4,982,333 shares held of record by The Column Group II, LP, (iii) 145,401 shares held of record by Ponoi Capital II, LP, and (iv) 1,599,417 shares held of record by Ponoi Capital, LP. David Goeddel is a Managing Partner of The Column Group, LLC, which is the general partner of The Column Group II GP, LP, which is the general partner of The Column Group II, LP. Dr. Goeddel is also a managing member of The Column Group II Management, LP. Dr. Goeddel is also a managing member of Ponoi Management, LLC, general partner of Ponoi Capital, LP., and a managing member of Ponoi II Management, LLC, general partner of Ponoi Capital II, LP. Dr. Goeddel may be deemed to share voting and investment power with respect to the shares reported herein and disclaims beneficial ownership of the shares except to the extent of his pecuniary interests therein. The address for the entities listed herein is 1700 Owens Street, Suite 500, San Francisco, CA 94158.

(2) The shares held for convenience in the name of KPCB Holdings, Inc., as nominee for the accounts of the following entities as follows: 3,444,199 shares held for the account of Kleiner Perkins Caufield & Byers XV, LLC (“KPCB XV”) and 102,864 shares held for the account of KPCB XV Founders Fund, LLC (“KPCB XV FF”). The managing member of KPCB XV and KPCB XV FF is KPCB XV Associates, LLC (“KPCB XV Associates”). Beth Seidenberg, L. John Doerr, Randy Komisar, Theodore E. Schlein, Wen Hsieh and William “Bing” Gordon, the managing members of KPCB XV Associates, exercise shared voting and dispositive control over the shares held by KPCB Holdings, Inc. as nominee for the accounts of KPCB XV and KPCB XV FF. The address for KPCB Holdings, Inc., as nominee, is 2750 Sand Hill Road, Menlo Park, CA 94025.

(3) Consists of (i) 1,641,666 shares held of record by Topspin Biotech Fund II, LP, and (ii) 933,705 shares held of record by Topspin Fund, LP. LG Management, LLC, the general partner of Topspin Fund, LP and Topspin Biotech Fund II, LP, may be deemed to have shared voting control and investment discretion over the shares of common stock held by Topspin Fund, LP and Topspin Biotech Fund II, LP. The address for each entity is 3 Expressway Plaza, Roslyn Heights, NY 11577.

(4) The address for The Regents of the University of California is 1111 Broadway Avenue, Oakland, CA 94607.
(5) Consists of (i) 125,000 shares held by Dr. Wong (of which 29,175 shares were issued pursuant to options that were early exercised and are subject to repurchase within 60 days of December 31, 2019), (ii) 355,000 shares held by The Wong Family Trust Dated February 4, 2008, for which Dr. Wong is a trustee , and (iii) 122,221 shares issuable pursuant to stock options exercisable within 60 days of December 31, 2019.
(6) Consists of 48,471 shares issuable pursuant to stock options exercisable within 60 days of December 31, 2019.
(7) Consists of 28,146 shares issuable pursuant to stock options exercisable within 60 days of December 31, 2019.
(8) Consists of 13,791 shares issuable pursuant to stock options exercisable within 60 days of December 31, 2019.
(9) Consists of (i) 84,722 shares held by Rieflin Family Trust u/a dtd 4/3/00, William J. Rieflin and Prudence H. Rieflin, Trustees, for which Mr. Rieflin is co-Trustee, and (ii) 17,434 shares issuable pursuant to stock options exercisable within 60 days of December 31, 2019.
(10) Consists of (i) 1,950 shares held by Dr. Robbins, and (ii) 3,333 shares issuable pursuant to stock options exercisable within 60 days of December 31, 2019.
(11) Consists of (i) 7,416,046 shares beneficially owned by our directors (or their affiliated entities) and executive officers and (ii) 240,340 shares issuable pursuant to stock options exercisable within 60 days of December 31, 2019.

DESCRIPTION OF CAPITAL STOCK

General

The following is a summary of the rights of our common and preferred stock and some of the provisions of our amended and restated certificate of incorporation and amended and restated bylaws, our investor rights agreement and relevant provisions of the Delaware General Corporation Law ("DGCL"). The descriptions herein are qualified in their entirety by our amended and restated certificate of incorporation, amended and restated bylaws and investor rights agreement, copies of which have been filed as exhibits to the registration statement of which this prospectus is a part, as well as the relevant provisions of the DGCL.

Our authorized capital stock consists of 550,000,000 shares, all with a par value of $0.0001 per share, of which:

- 500,000,000 shares are designated as common stock; and
- 50,000,000 shares are designated as preferred stock.

Common Stock

As of December 31, 2019, there were 21,833,037 shares of our common stock outstanding and held of record by 154 stockholders. Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders, including the election of directors, and do not have cumulative voting rights. Accordingly, the holders of a majority of the outstanding shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they so choose, other than any directors that holders of any preferred stock we may issue may be entitled to elect. Subject to preferences that may be applicable to any then outstanding preferred stock, holders of common stock are entitled to receive ratably those dividends, if any, as may be declared by the board of directors out of legally available funds. In the event of our liquidation, dissolution or winding up, the holders of common stock will be entitled to share ratably in the assets legally available for distribution to stockholders after the payment of or provision for all of our debts and other liabilities, subject to the prior rights of any preferred stock then outstanding. Holders of common stock have no preemptive or conversion rights or other subscription rights and there are no redemption or sinking funds provisions applicable to the common stock. All outstanding shares of common stock are, and the common stock to be outstanding upon the closing of this offering will be, duly authorized, validly issued, fully paid and nonassessable. All authorized but unissued shares of our common stock will be available for issuance by our board of directors without any further stockholder action, except as required by the listing standards of Nasdaq. 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

As of December 31, 2019, there were no shares of our preferred stock outstanding. Our board of directors may, without further action by our stockholders, fix the rights, preferences, privileges and restrictions of up to an aggregate of 50,000,000 shares of convertible preferred stock in one or more series and authorize their issuance. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of our common stock. The issuance of our convertible preferred stock could adversely affect the voting power of holders of our common stock, and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change of control or other corporate action.

Options

As of December 31, 2019, we had outstanding options under our equity compensation plans to purchase an aggregate of 1,313,468 shares of our common stock with a weighted-average exercise price of $9.77 per share.

Registration Rights

We are party to an amended and restated investor rights agreement that provides that certain stockholders, including certain holders of common stock issuable upon the conversion of our convertible preferred stock, including certain holders of at least 5% of our outstanding capital stock, have certain registration rights as set forth below. The registration of shares of our common stock by the exercise of registration rights described below would enable the holders to sell these shares without restriction under the Securities Act when the applicable registration statement is declared effective. We will pay the registration expenses, other than underwriting discounts and commissions, of the shares registered pursuant to the demand, piggyback and Form S-3 registration rights described below.

Generally, in an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit the number of shares such holders may include. The demand, piggyback and Form S-3 registration rights described below will expire on October 30, 2022, or with respect to any particular stockholder, such time after the closing of our initial public offering that such stockholder holds less than 1% of our outstanding common stock (including all shares of preferred stock on an as-converted basis) and such stockholder can sell all of its shares entitled to registration rights under Rule 144 of the Securities Act during any 90-day period.

Demand Registration Rights

The holders of an aggregate of 17,467,184 shares of our common stock, as of December 31, 2019, are entitled to certain demand registration rights. At any time beginning the six months after the effective date of our initial public offering, the holders of at least 30% of these shares may request that we register all or a portion of their shares. We are obligated to effect only two such registrations. Such request for registration must cover shares with an anticipated aggregate offering price, net of underwriting discounts and commissions, of at least $20 million.

Piggyback Registration Rights

The holders of an aggregate of 17,467,184 shares of our common stock as of December 31, 2019 are entitled to, and we expect that the necessary percentage of holders will waive, their rights to notice of this offering and to include their shares of registrable securities in this offering. After this offering, in the event that we propose to register any of our securities under the Securities Act, either for our own account or for the account of other security holders, the holders of these shares will be entitled to certain piggyback registration rights allowing the holders to include their shares in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to (i) a registration statement relating to any employee benefit plans, (ii) a registration relating to a corporate reorganization or other Rule 145 transaction, (iii) a registration relating to stock issued upon conversion of debt securities, or (iv) a registration on any registration form that does not permit secondary sales, the holders of these shares are entitled to notice of the registration and have the right to include their shares in the registration, subject to limitations that the underwriters may impose on the number of shares included in the offering.

Form S-3 Registration Rights

The holders of an aggregate of 17,467,184 shares of common stock as of December 31, 2019 are entitled to certain Form S-3 registration rights. The holders of these shares can make a request that we register their

shares on Form S-3 if we are qualified to file a registration statement on Form S-3 and if the reasonably anticipated aggregate gross proceeds of the shares offered would equal or exceed $5 million. We will not be required to effect more than two registrations on Form S-3 within any 12-month period.

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

Some provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that 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.

Stockholder Meetings

Our amended and restated bylaws provide that a special meeting of stockholders may be called only by our chair of the board, chief executive officer or president, 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.

Elimination of Stockholder Action by Written Consent

Our amended and restated certificate of incorporation and amended and restated bylaws eliminate the right of stockholders to act by written consent without a meeting.

Staggered Board

Our board of directors will be 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

Our amended and 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 not less than two thirds of the total voting power of all of our outstanding voting stock then entitled to vote in the election of directors.

Stockholders Not Entitled to Cumulative Voting

Our amended and 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 DGCL, 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 amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: (1) any derivative action or proceeding brought on our behalf; (2) any action asserting a breach of fiduciary duty owed by any of our directors, officers, employees or agents to us or our stockholders; (3) any action asserting a claim against us or any of our directors, officers or other employees arising pursuant to any provisions of the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws; or (4) any action asserting a claim against us or any of our directors, officers or other employees that is governed by the internal affairs doctrine. These provisions would not apply to suits brought to enforce a duty or liability created by the Exchange Act or the rules and regulations thereunder. However, these provisions apply to Securities Act claims and Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce a duty or liability created by the Securities Act or the rules and regulations thereunder. Accordingly, there is uncertainty as to whether a court would enforce such provisions, and our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

Our amended and restated certificate of incorporation further provides that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, subject to and contingent upon a final adjudication in the State of Delaware of the enforceability of such exclusive forum provision.

These exclusive-forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and other employees. If a court were to find the exclusive-forum provisions in our amended and restated certificate of incorporation to be inapplicable or unenforceable, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could seriously harm our business. For example, the Court of Chancery of the State of Delaware recently determined that a provision stating that U.S. federal district courts are the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act is not enforceable. However, this decision may be reviewed and ultimately overturned by the Delaware Supreme Court. If the Court of Chancery's decision were to be overturned, we would seek to enforce the federal district court exclusive forum provision in our amended and restated certificate of incorporation.

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, would require approval by holders of at least two-thirds of the total voting power of all of our outstanding voting stock.

The provisions of Delaware law, our amended and 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 is American Stock Transfer & Trust Company, LLC.

Exchange Listing

Our common stock is listed on the Nasdaq Global Market (“Nasdaq”), under the symbol “RAPT.”

SHARES ELIGIBLE FOR FUTURE SALE

Future sales of substantial amounts of our common stock in the public market, or the perception that such sales may occur, could adversely affect the market price of our common stock and impair our ability to raise capital.

Based on the number of shares of our common stock outstanding as of September 30, 2019, after giving effect to the 3,427,360 shares of our common stock sold in our initial public offering and assuming (1) the issuance of 2,000,000 shares of common stock in this offering and (2) no exercise of outstanding stock options, we will have an aggregate of approximately 23,829,584 shares of common stock outstanding upon completion of this offering.

Upon completion of this offering, 2,352,760 of the shares of common stock sold in our initial public offering and all of 2,500,000 the shares of common stock sold in this offering will be freely tradable without restriction or further registration under the Securities Act, subject to the provisions of Rules 144 and Rule 701 under the Securities Act.

As a result of the lock-up agreements and market standoff provisions described below and the provisions of Rules 144 and 701 of the Securities Act, shares of our common stock will be available for sale in the public market as follows:

- beginning April 27, 2020, up to 12,060,778 shares held by existing securityholders prior to our initial public offering may be eligible for sale in the public market;
- approximately 7,416,046 additional shares of our common stock will be eligible for sale upon expiration of lock-up agreements entered into in connection with this offering, beginning 90 days after the date of the underwriting agreement, subject in certain circumstances to the volume, manner of sale and other limitations under Rule 144 of the Securities Act.

Lock-Up Agreements and Market Stand-Off Agreements

In connection with this offering, we, our executive officers, directors, and certain stockholders affiliated with our directors agreed with the underwriters, subject to certain exceptions, not to dispose of or hedge any of our common stock or securities convertible into or exchangeable for shares of common stock for a period of 90 days from the date of the underwriting agreement, except with the prior written consent of BMO Capital Markets Corp., Wells Fargo Securities, LLC, UBS Securities LLC and Cantor Fitzgerald & Co. See “Underwriting” for a more complete description of these lock-up agreements.

In addition, in connection with our initial public offering, we, our executive officers, directors, and holders of substantially all of our common stock and securities convertible into or exchangeable for our common stock agreed with BMO Capital Markets Corp., Wells Fargo Securities, LLC and UBS Securities LLC, subject to certain exceptions, not to dispose of or hedge any of our common stock or securities convertible into or exchangeable for shares of common stock during the period from October 30, 2019 to April 27, 2020, except with the prior written consent of BMO Capital Markets Corp., Wells Fargo Securities, LLC and UBS Securities LLC. The underwriters have waived this lock-up restriction with respect to the shares of our common stock to be sold by us in this offering.

Registration Rights

Upon expiration of the lock-up agreements described above, certain of our stockholders will have the right to require us to register their shares under the Securities Act. See “Description of Capital Stock—Registration Rights.”

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS OF OUR COMMON STOCK

The following summary describes the material U.S. federal income tax consequences of the acquisition, ownership and disposition of our common stock acquired in this offering by Non-U.S. Holders (as defined below). This discussion is not a complete analysis of all potential U.S. federal income tax consequences relating thereto, and does not deal with foreign, state and local consequences that may be relevant to Non-U.S. Holders in light of their particular circumstances, nor does it address U.S. federal tax consequences (such as gift and estate taxes) other than income taxes. Special rules different from those described below may apply to certain Non-U.S. Holders that are subject to special treatment under the Internal Revenue Code of 1986, as amended (the "Code"), such as financial institutions, insurance companies, tax-exempt organizations, broker-dealers and traders in securities, U.S. expatriates, "controlled foreign corporations," "passive foreign investment companies," corporations that accumulate earnings to avoid U.S. federal income tax, corporations organized outside of the United States, any state thereof or the District of Columbia that are nonetheless treated as U.S. taxpayers for U.S. federal income tax purposes, persons that hold our common stock as part of a "straddle," "hedge," "conversion transaction," "synthetic security" or integrated investment or other risk reduction strategy, persons who acquire our common stock through the exercise of an option or otherwise as compensation, persons subject to the alternative minimum tax or federal Medicare contribution tax on net investment income, persons subject to special tax accounting rules under Section 451(b) of the Code, "qualified foreign pension funds" as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds, partnerships and other pass-through entities or arrangements, and investors in such pass-through entities or arrangements. Such Non-U.S. Holders are urged to consult their own tax advisors to determine the U.S. federal, state, local and other tax consequences that may be relevant to them. Furthermore, the discussion below is based upon the provisions of the Code, and Treasury Regulations, rulings and judicial decisions thereunder as of the date hereof, and such authorities may be repealed, revoked or modified, perhaps retroactively, so as to result in U.S. federal income tax consequences different from those discussed below. We have not requested a ruling from the U.S. Internal Revenue Service (the "IRS") with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions. This discussion assumes that the Non-U.S. Holder holds our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment).

This discussion is for informational purposes only and is not tax advice. Persons considering the purchase of our common stock pursuant to this offering should consult their own tax advisors concerning the U.S. federal income, estate and other tax consequences of acquiring, owning and disposing of our common stock in light of their particular situations as well as any consequences arising under the laws of any other taxing jurisdiction, including any state, local or foreign tax consequences.

For the purposes of this discussion, a "Non-U.S. Holder" is, for U.S. federal income tax purposes, a beneficial owner of common stock that is neither a U.S. Holder, nor a partnership (or other entity treated as a partnership for U.S. federal income tax purposes regardless of its place of organization or formation). A "U.S. Holder" means a beneficial owner of our common stock that is for U.S. federal income tax purposes any of the following:

- 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 in or under the laws of the U.S., any state thereof or the District of Columbia;
- an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if it (1) is subject to the primary supervision of a court within the U.S. and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

Distributions

Distributions, if any, made on our common stock to a Non-U.S. Holder to the extent made out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles) generally will constitute dividends for U.S. tax purposes and will be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty, subject to the discussions below regarding effectively connected income, backup withholding and foreign accounts. To obtain a reduced rate of withholding under a treaty, a Non-U.S. Holder generally will be required to provide us or our paying agent with a properly executed IRS Form W-8BEN (in the case of individuals) or IRS Form W-8BEN-E (in the case of entities), or other appropriate form, certifying the Non-U.S. Holder's entitlement to benefits under that treaty. This certification must be provided to us or our paying agent prior to the payment of dividends and must be updated periodically. In the case of a Non-U.S. Holder that is an entity, Treasury Regulations and the relevant tax treaty provide rules to determine whether, for purposes of determining the applicability of a tax treaty, dividends will be treated as paid to the entity or to those holding an interest in that entity. If a Non-U.S. Holder holds stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to such agent. The holder's agent will then be required to provide certification to us or our paying agent, either directly or through other intermediaries. If you are eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty and you do not timely file the required certification, you may be able to obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for a refund with the IRS.

We generally are not required to withhold tax on dividends paid to a Non-U.S. Holder that 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, are attributable to a permanent establishment or fixed base that such holder maintains in the United States) if a properly executed IRS Form W-8ECI, stating that the dividends are so connected, is furnished to us or our paying agent (or, if stock is held through a financial institution or other agent, to such agent). In general, such effectively connected dividends will be subject to U.S. federal income tax, on a net income basis at the regular rates applicable to U.S. residents. A corporate Non-U.S. Holder receiving effectively connected dividends may also be subject to an additional "branch profits tax," which is imposed, under certain circumstances, at a rate of 30% (or such lower rate as may be specified by an applicable treaty) on the corporate Non-U.S. Holder's effectively connected earnings and profits, subject to certain adjustments. Non-U.S. Holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules.

To the extent distributions on our common stock, if any, exceed our current and accumulated earnings and profits, they will first reduce the Non-U.S. Holder's adjusted basis in our common stock, but not below zero, and then will be treated as gain to the extent of any excess amount distributed, and taxed in the same manner as gain realized from a sale or other disposition of common stock as described in the next section.

Gain on Disposition of Our Common Stock

Subject to the discussions below regarding backup withholding and foreign accounts, a Non-U.S. Holder generally will not be subject to U.S. federal income tax with respect to gain realized on a sale or other disposition of our common stock unless (a) the gain is effectively connected with a trade or business of such holder in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base that such holder maintains in the United States), (b) the Non-U.S. Holder is a nonresident alien individual and is present in the United States for 183 or more days in the taxable year of the disposition and certain other conditions are met or (c) we are or have been a "United States real property holding corporation" within the meaning of Code Section 897(c)(2) at any time within the shorter of the five-year period preceding such disposition or such holder's holding period. In general, we would be a United States real property holding corporation if our interests in U.S. real estate comprise (by fair market value) at least half of our business assets. We believe that we have not been and we are not, and do not anticipate becoming, a United States real property

holding corporation. Even if we are treated as a United States real property holding corporation, gain realized by a Non-U.S. Holder on a disposition of our common stock will not be subject to U.S. federal income tax so long as (1) the Non-U.S. Holder owned, directly, indirectly and constructively, no more than 5% of our common stock at all times within the shorter of (i) the five-year period preceding the disposition or (ii) the holder's holding period and (2) our common stock is regularly traded on an established securities market. There can be no assurance that our common stock will continue to qualify as regularly traded on an established securities market. If any gain on your disposition is taxable because we are a United States real property holding corporation and your ownership of our common stock exceeds 5%, you will be taxed on such disposition generally in the manner as gain that is effectively connected with the conduct of a U.S. trade or business (subject to the provisions under an applicable income tax treaty), except that the branch profits tax generally will not apply.

If you are a Non-U.S. Holder described in (a) above, you will be required to pay tax on the net gain derived from the sale at regular U.S. federal income tax rates, and corporate Non-U.S. Holders described in (a) above may be subject to the additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. Gain described in (b) above will be subject to U.S. federal income tax at a flat 30% rate or such lower rate as may be specified by an applicable income tax treaty, which gain may be offset by certain U.S.-source capital losses (even though you are not considered a resident of the United States), provided that the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

Information Reporting Requirements and Backup Withholding

Generally, we must report information to the IRS with respect to any dividends we pay on our common stock (even if the payments are exempt from withholding), including the amount of any such dividends, the name and address of the recipient, and the amount, if any, of tax withheld. A similar report is sent to the holder to whom any such dividends are paid. Pursuant to tax treaties or certain other agreements, the IRS may make its reports available to tax authorities in the recipient's country of residence.

Dividends paid by us (or our paying agents) to a Non-U.S. Holder may also be subject to U.S. backup withholding. U.S. backup withholding generally will not apply to a Non-U.S. Holder who provides a properly executed IRS Form W-8BEN, IRS Form W-8BEN-E or IRS Form W-ECI, or otherwise establishes an exemption. Notwithstanding the foregoing, backup withholding may apply if the payor has actual knowledge, or reason to know, that the holder is a U.S. person who is not an exempt recipient.

U.S. information reporting and backup withholding requirements generally will apply to the proceeds of a disposition of our common stock effected by or through a U.S. office of any broker, U.S. or foreign, except that information reporting and such requirements may be avoided if the holder provides a properly executed IRS Form W-8BEN or IRS Form W-8BEN-E or otherwise meets documentary evidence requirements for establishing non-U.S. person status or otherwise establishes an exemption. Generally, U.S. information reporting and backup withholding requirements will not apply to a payment of disposition proceeds to a Non-U.S. Holder where the transaction is effected outside the United States through a non-U.S. office of a non-U.S. broker. Information reporting and backup withholding requirements may, however, apply to a payment of disposition proceeds if the broker has actual knowledge, or reason to know, that the holder is, in fact, a U.S. person. For information reporting purposes, certain brokers with substantial U.S. ownership or operations will generally be treated in a manner similar to U.S. brokers.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be credited against the tax liability of persons subject to backup withholding, provided that the required information is timely furnished to the IRS.

Foreign Accounts

Sections 1471 through 1474 of the Code (commonly referred to as FATCA) impose a U.S. federal withholding tax of 30% on certain payments, including dividends paid on and the gross proceeds of a disposition

of our common stock paid to a foreign financial institution (as specifically defined by applicable rules) unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity holders of such institution, as well as certain account holders that are foreign entities with U.S. owners). FATCA also generally imposes a federal withholding tax of 30% on certain payments, including dividends paid on and the gross proceeds of a disposition of our common stock to a non-financial foreign entity unless such entity provides the withholding agent with either a certification that it does not have any substantial direct or indirect U.S. owners or provides information regarding substantial direct and indirect U.S. owners of the entity. An intergovernmental agreement between the United States and an applicable foreign country may modify those requirements. The withholding tax described above will not apply if the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from the rules.

The withholding provisions described above currently apply to payments of dividends, and, subject to the recently released proposed Treasury Regulations described below, will apply to payments of gross proceeds from a sale or other disposition of common stock on or after January 1, 2019.

The U.S. Treasury Department recently released proposed regulations which, if finalized in their present form, would eliminate the federal withholding tax of 30% applicable to the gross proceeds of a disposition of our common stock. In its preamble to such proposed regulations, the U.S. Treasury Department stated that taxpayers may generally rely on the proposed regulations until final regulations are issued.

Holders are encouraged to consult with their own tax advisors regarding the possible implications of FATCA on their investment in our common stock.

EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY RECENT OR PROPOSED CHANGE IN APPLICABLE LAW.

UNDERWRITING

BMO Capital Markets Corp., Wells Fargo Securities, LLC, UBS Securities LLC and Cantor Fitzgerald & Co. are acting as representatives of each of the underwriters named below. Subject to the terms and conditions set forth in an underwriting agreement among us and the underwriters, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the number of shares of common stock set forth opposite its name below.

Underwriter	Number of Shares
BMO Capital Markets Corp.	843,750
Wells Fargo Securities, LLC	843,750
UBS Securities LLC	562,500
Cantor Fitzgerald & Co.	250,000
Total	2,500,000

Subject to the terms and conditions set forth in the underwriting agreement, the underwriters have agreed, severally and not jointly, to purchase all of the shares sold under the underwriting agreement if any of these shares are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the nondefaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make in respect of those liabilities.

The underwriters are offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, including the validity of the shares, and other conditions contained in the underwriting agreement, such as the receipt by the underwriters of officer's certificates and legal opinions. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commissions and Discounts

The representatives have advised us that the underwriters propose initially to offer the shares to the public at the public offering price set forth on the cover page of this prospectus and to dealers at that price less a concession not in excess of $1.08 per share. After the offering, the public offering price, concession or any other term of the offering may be changed.

The following table shows the public offering price, underwriting discount and proceeds before expenses to us. The information assumes either no exercise or full exercise by the underwriters of their option to purchase additional shares.

	Per Share	Without Option	With Option
Public offering price	$ 30.00	$ 75,000,000	$86,250,000
Underwriting discount	$ 1.80	$ 4,500,000	$ 5,175,000
Proceeds, before expenses, to us	$ 28.20	$ 70,500,000	$81,075,000

The expenses of the offering, not including the underwriting discount, are estimated at $0.8 million and are payable by us. We have agreed to reimburse the underwriters for expenses relating to clearance of this offering with the Financial Industry Regulatory Authority up to $25,000.

Option to Purchase Additional Shares

We have granted an option to the underwriters, exercisable for 30 days after the date of this prospectus, to purchase up to 375,000 additional shares of our common stock at the public offering price, less the underwriting discount. If the underwriters exercise this option, each will be obligated, subject to conditions contained in the underwriting agreement, to purchase a number of additional shares proportionate to that underwriter's initial amount reflected in the above table.

No Sales of Similar Securities

In connection with our initial public offering, we, our officers, directors, and holders of substantially all of our common stock agreed with the underwriters, subject to certain exceptions, not to dispose of or hedge any of our common stock or securities convertible into or exchangeable for shares of common stock for 180 days following the date of our initial public offering. BMO Capital Markets Corp., Wells Fargo Securities, LLC and UBS Securities LLC, on behalf of the underwriters in our initial public offering, have consented to the release of this lock-up restriction with respect to the shares of our common stock to be sold in this offering.

We and our executive officers and directors and certain security holders affiliated with our directors have agreed not to sell or transfer any common stock or securities convertible into, exchangeable for, exercisable for, or repayable with common stock, for the period ending 90 days after the date of this prospectus without first obtaining the written consent of the representatives. Specifically, we and these other persons have agreed, with certain exceptions, not to directly or indirectly:

- offer, pledge, sell or contract to sell any common stock,
- sell any option or contract to purchase any common stock,
- purchase any option or contract to sell any common stock,
- grant any option, right or warrant to purchase any common stock,
- otherwise dispose of or transfer any common stock,
- request or demand that we file or make a confidential submission of a registration statement related to the common stock or
- enter into any swap or other agreement or any transaction that transfers in whole or in part, directly or indirectly, the economic consequence of ownership of any common stock whether any such swap or transaction is to be settled by delivery of shares or other securities, in cash or otherwise.

The exceptions permit our executive officers and directors and such security holders, subject to certain restrictions, to:

- transfer the common stock (i) as a bona fide gift or gifts, (ii) to the person's immediate family or any trust for the direct or indirect benefit of the person or their immediate family, (iii) as a distribution to the person's limited partners or stockholders, (iv) to the person's affiliates or any investment fund or other entity controlled or managed by the person, or (v) by will of intestate successor.
- transfer the common stock to us upon exercise of any option granted under our incentive plans described in this prospectus, including the surrender of shares of common stock to us in "net" or "cashless" exercise of any option;

- transfer the common stock to us in connection with our repurchase of shares of common stock pursuant to a repurchase right arising upon the termination of the person's employment with us;
- convert our preferred stock into shares of common stock;
- transfer the common stock pursuant to an order of a court of competent jurisdiction or in connection with a qualified domestic order or divorce settlement; and
- establishing a trading plan pursuant to Rule 10b5-1 under the Exchange Act, provided that no sales of common stock are made under such plans during the restricted period.

This lock-up provision applies to common stock and to securities convertible into or exchangeable or exercisable for or repayable with common stock. It also applies to common stock owned now or acquired later by the person executing the agreement or for which the person executing the agreement later acquires the power of disposition.

The lock-up restrictions applicable to us do not apply to shares of our common stock or other securities issued by us in connection with a transaction that includes a commercial relationship (including strategic alliances, commercial lending relationships, joint ventures and strategic acquisitions), provided that (i) the aggregate number of shares issued pursuant to such a transaction does not exceed 5.0% of the total number of outstanding shares of our common stock immediately following the issuance and sale of the securities and (ii) the recipient of any such shares shall enter into a lock-up agreement.

Nasdaq Global Market Listing

Our common stock is listed on the Nasdaq Global Market under the symbol "RAPT."

Price Stabilization, Short Positions and Penalty Bids

Until the distribution of the shares is completed, SEC rules may limit underwriters from bidding for and purchasing our common stock. However, the representatives may engage in transactions that stabilize the price of the common stock, such as bids or purchases to peg, fix or maintain that price.

In connection with the offering, the underwriters may purchase and sell our common stock in the open market. These transactions may include short sales, purchases on the open market to cover positions created by short sales and stabilizing transactions. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. "Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares described above. The underwriters may close out any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option granted to them. "Naked" short sales are sales in excess of such option. 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 our common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of shares of common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. The underwriters may conduct these transactions on the Nasdaq Global Market, in the over-the-counter market or otherwise.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. In addition, neither we nor any of the underwriters make any representation that the representatives will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Electronic Distribution

In connection with the offering, certain of the underwriters or securities dealers may distribute prospectuses by electronic means, such as email.

Other Relationships

Some of the underwriters and their affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. They have received, or may in the future receive, customary fees and commissions for these transactions.

In addition, in the ordinary course of their business activities, the underwriters and their 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. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

European Economic Area and United Kingdom

In relation to each member state of the European Economic Area and the United Kingdom (each a "Relevant State"), no shares have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that offers of shares may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

(a) to any legal entity which is a qualified investor as defined in the Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or

(c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares shall require the Company or any representative to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares in any Relevant State means the communication in any form and by any means of sufficient information on the terms of

the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

The above selling restriction is in addition to any other selling restrictions set out below.

Notice to Prospective Investors in the United Kingdom

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are "qualified investors" (as defined in the Prospectus Directive) (i) who have professional experience in matters relating to investments falling within Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "Order") and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). This document must not be acted on or relied on in the United Kingdom by persons who are not relevant persons. In the United Kingdom, any investment or investment activity to which this document relates is only available to, and will be engaged in with, relevant persons.

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 ("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, nor 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 ("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 ("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 ("ASIC"), in relation to the offering.

This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the "Corporations Act"), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (the "Exempt Investors") who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional investors" (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take 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.

Notice to Prospective Investors in Hong Kong

The securities have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the securities has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Notice to Prospective Investors in Japan

The securities have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) and, accordingly, will not be offered or sold, directly or indirectly, in Japan, or for the benefit of any Japanese Person or to others for re-offering or resale, directly or indirectly, in Japan or to any Japanese Person, except in compliance with all applicable laws, regulations and ministerial guidelines promulgated by relevant Japanese governmental or regulatory authorities in effect at the relevant time. For the purposes of this paragraph, "Japanese Person" shall mean any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

Notice to Prospective Investors in 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 securities may not be circulated or distributed, nor may the securities

be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA"), (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the securities are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the securities pursuant to an offer made under Section 275 of the SFA except:

(c) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(d) where no consideration is or will be given for the transfer;

(e) where the transfer is by operation of law;

(f) as specified in Section 276(7) of the SFA; or

(g) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Notice to Prospective Investors in Canada

The securities may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

LEGAL MATTERS

The validity of the shares of common stock being offered by this prospectus will be passed upon for us by Cooley LLP, Palo Alto, California. The underwriters are being represented by Davis Polk & Wardwell LLP, Menlo Park, California.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements at December 31, 2017 and 2018, and for the years then ended, as set forth in their report. We have included our financial statements in this prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority 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, including exhibits and schedules, under the Securities Act, with respect to the shares of common stock being offered by this prospectus. This prospectus, which constitutes part of the registration statement, does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our SEC filings, including the registration statement, over the internet at the SEC's website at www.sec.gov.

We are subject to the information reporting requirements of the Securities Exchange Act of 1934 and file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information are available for inspection at the website of the SEC referred to above. We also maintain a website at www.rapt.com, at which, following the closing of this offering, you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Years ended December 31, 2017 and 2018

Nine Months Ended September 30, 2018 and 2019

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of
RAPT Therapeutics, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of RAPT Therapeutics, Inc. (f/k/a FLX, Bio, Inc.) (the Company) as of December 31, 2017 and 2018, the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders' deficit, 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 2018, 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. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements 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.

Redwood City, California
May 24, 2019
except for the retroactive effect of the 1-for-6 reverse stock split as described in Note 2, as to which the date is July 22, 2019

RAPT THERAPEUTICS, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share data)

	December 31, 2017	December 31, 2018	Pro forma Stockholders' Equity as of December 31, 2018 (Unaudited)
Assets			
Current assets:			
Cash and cash equivalents	$ 47,517	$ 63,798	
Prepaid expenses and other current assets	725	1,264	
Total current assets	48,242	65,062	
Property and equipment, net	1,913	4,159	
Other assets	236	389	
Total assets	$ 50,391	$ 69,610	
Liabilities, Convertible Preferred Stock and Stockholders' Deficit			
Current liabilities:			
Accounts payable	$ 1,106	$ 1,771	
Accrued expenses	1,492	2,488	
Other current liabilities	650	384	
Total current liabilities	3,248	4,643	
Deferred rent, net of current portion	905	969	
Commitments (See Note 6)			
Convertible preferred stock, $0.0001 par value: 104,018,468 shares authorized; 75,563,784 and 98,491,880 shares issued and outstanding at December 31, 2017 and 2018, respectively; aggregate liquidation preference of $170,000 at December 31, 2018; no shares issued and outstanding, pro forma (unaudited)	108,643	161,111	$ —
Stockholders' Deficit			
Common stock, $0.0001 par value: 119,200,000 shares authorized; 880,191 and 878,413 shares issued and outstanding at December 31, 2017 and 2018, respectively; 17,293,694 shares issued and outstanding as of December 31, 2018, pro forma (unaudited)	1	1	2
Additional paid-in capital	21,005	22,441	183,551
Related party promissory note for the purchase of common stock	(605)	(598)	(598)
Accumulated other comprehensive loss	—	(4)	(4)
Accumulated deficit	(82,806)	(118,953)	(118,953)
Total stockholders' (deficit) equity	(62,405)	(97,113)	$ 63,998
Total liabilities, convertible preferred stock and stockholders' deficit	$ 50,391	$ 69,610	

See accompanying notes to consolidated financial statements.

RAPT THERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except share and per share data)

	Year Ended December 31, 2017	2018
Operating expenses:		
Research and development	$ 25,618	$ 31,767
General and administrative	3,713	5,180
Total operating expenses	29,331	36,947
Loss from operations	29,331	36,947
Other income		
Other income, net	216	800
Net loss	$ (29,115)	$ (36,147)
Other comprehensive loss	—	4
Total comprehensive loss	$ (29,115)	$ (36,151)
Net loss per share, basic and diluted	$ (67.45)	$ (58.09)
Weighted average number of shares used in computing net loss per share, basic and diluted	431,679	622,289
Pro forma net loss per share, basic and diluted (unaudited)		$ (2.50)
Weighted average number of shares used in computing pro forma net loss per share, basic and diluted (unaudited)		14,461,086

See accompanying notes to consolidated financial statements.

RAPT THERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT
(In thousands, except share amounts)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Related Party Promissory Notes for the Purchase of Common Stock	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount					
Balance at December 31, 2016	62,509,105	$ 78,787	868,056	$ 1	$ 20,043	$ (596)	$ (53,691)	$ —	$ (34,243)
Issuance of Series C convertible preferred stock, net of issuance cost	13,054,679	29,856	—	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options, net of repurchase	—	—	12,135	—	246	—	—	—	246
Interest on promissory notes from related parties for purchase of common stock	—	—	—	—	—	(9)	—	—	(9)
Stock-based compensation	—	—	—	—	716	—	—	—	716
Net loss	—	—	—	—	—	—	(29,115)	—	(29,115)
Balance at December 31, 2017	75,563,784	108,643	880,191	1	21,005	(605)	(82,806)	—	(62,405)
Issuance of Series C convertible preferred stock, net of issuance cost	13,054,684	29,914	—	—	—	—	—	—	—
Issuance of Series C-2 convertible preferred stock, net of issuance cost	9,873,412	22,554	—	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options, net of repurchase	—	—	6,555	—	266	—	—	—	266
Repurchase of common stock from related party	—	—	(8,333)	—	—	17	—	—	17
Interest on promissory notes from related parties for purchase of common stock	—	—	—	—	—	(10)	—	—	(10)
Stock-based compensation	—	—	—	—	1,170	—	—	—	1,170
Foreign currency translation adjustment	—	—	—	—	—	—	—	(4)	(4)
Net loss	—	—	—	—	—	—	(36,147)	—	(36,147)
Balance at December 31, 2018	98,491,880	$ 161,111	878,413	$ 1	$ 22,441	$ (598)	$ (118,953)	$ (4)	$ (97,113)

See accompanying notes to consolidated financial statements.

RAPT THERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31, 2017	2018
Operating activities		
Net loss	$ (29,115)	$ (36,147)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	1,384	1,237
Stock-based compensation expense	716	1,170
Loss on disposal of capital equipment	15	17
Other noncash income (loss), net	(9)	(14)
Changes in operating assets and liabilities:		
Prepaid expenses and other long-term assets	(34)	(691)
Accounts payable and accrued liabilities	(80)	1,475
Net cash used in operating activities	(27,123)	(32,953)
Investing activities		
Purchase of property and equipment	(1,124)	(3,500)
Net cash used in investing activities	(1,124)	(3,500)
Financing activities		
Proceeds from the sale of convertible preferred stock, net of issuance costs	29,856	52,468
Proceeds from issuance of common stock, net of repurchases	246	266
Net cash provided by financing activities	30,102	52,734
Net increase in cash and cash equivalents	1,855	16,281
Cash and cash equivalents at beginning of year	45,662	47,517
Cash and cash equivalents at end of year	$ 47,517	$ 63,798
Supplemental Disclosures of Non-Cash Investing and Financing Information		
Property and equipment purchases included in accounts payable	$ —	$ 753

See accompanying notes to consolidated financial statements.

RAPT THERAPEUTICS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Organization and Liquidity Risks

Description of the Business

RAPT Therapeutics, Inc. ("RAPT" or the "Company"), is a clinical-stage, immunology-based biopharmaceutical company focused on discovering, developing and commercializing oral small molecule therapies for patients with significant unmet needs in oncology and inflammatory diseases. Utilizing its proprietary drug discovery and development engine, the Company develops highly selective small molecules that are designed to modulate the critical immune responses underlying these diseases. In May 2019, the Company changed its name from FLX Bio, Inc. ("FLX") to RAPT Therapeutics, Inc.

The Company is located in South San Francisco, California.

Liquidity and Management Plans

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. Since inception, the Company has incurred net losses and negative cash flows from operations. During the year ended December 31, 2018, the Company incurred a net loss of $36.1 million and used $33.0 million of cash in operations. At December 31, 2018, the Company had cash and cash equivalents of $63.8 million and an accumulated deficit of $119.0 million. Management expects losses to continue for the next several years and does not expect positive cash flows in the foreseeable future.

The Company has historically financed its operations through the sale of convertible preferred stock. The Company has evaluated and concluded there are no conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a period of at least one year following the date that these consolidated financial statements were issued. Management expects operating losses to continue for the foreseeable future. As a result, the Company will need to raise additional capital. If sufficient funds on acceptable terms are not available when needed, the Company could be required to significantly reduce its operating expenses and delay, reduce the scope of or eliminate one or more of its development programs. Failure to manage discretionary spending or raise additional financing, as needed, may adversely impact the Company's ability to achieve its intended business objectives.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP") and include the consolidated accounts of the Company and its wholly-owned subsidiary, RAPT Therapeutics Australia Pty Ltd. which was established in 2018. All intercompany balances and transactions have been eliminated in consolidation.

Stock Split

On July 19, 2019, the Company filed an amendment to the Company's amended and restated certificate of incorporation to effect a reverse split of shares of the Company's common stock on a one-for-six basis (the Reverse Stock Split). In connection with the Reverse Stock Split, the conversion ratio for the Company's outstanding convertible preferred stock was proportionately adjusted such that the common stock issuable upon conversion of such preferred stock was decreased in proportion to the Reverse Stock Split. The par value of the common stock was not adjusted as a result of the Reverse Stock Split. All references to common stock, options to

purchase common stock, early exercised options, share data, per share data, convertible preferred stock (to the extent presented on an as-converted to common stock basis) and related information contained in these consolidated financial statements have been retrospectively adjusted to reflect the effect of the Reverse Stock Split for all periods presented.

Unaudited Pro Forma Financial Information

The unaudited pro forma consolidated stockholders' equity as of December 31, 2018, assumes the conversion of all outstanding shares of convertible preferred stock into 98,491,880 shares of common stock immediately prior to the completion of the Company's planned initial public offering ("IPO"). The shares of common stock issuable and the proceeds expected to be received in the IPO are excluded from such pro forma financial information. 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 for the year ended December 31, 2018, 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.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. The Company bases its estimates on historical experience and market-specific or other relevant assumptions that it believes are reasonable under the circumstances. The amounts of assets and liabilities reported in the Company's balance sheets and the amount of expenses and income reported for each of the periods presented are affected by estimates and assumptions, which are used for, but are not limited to, determining the fair value of assets and liabilities, common stock valuation and stock-based compensation. Actual results could differ from such estimates or assumptions.

Segments

The Company operates as a single operating segment. The Company's chief operating decision maker, its President and Chief Executive Officer, manages the Company's operations on a consolidated basis for the purposes of allocating resources, making operating decisions and evaluating financial performance.

Fair Value of Financial Instruments

The carrying amount of the Company's financial instruments, including certain prepaid and accrued expenses, approximates fair value due to their short-term maturities.

Cash and Cash Equivalents

Cash equivalents are financial instruments that potentially subject the Company to concentrations of credit risk. The Company considers all highly liquid investments with original maturities of 90 days or less from the date of purchase to be cash equivalents. The Company invests its cash and cash equivalents in money market funds. The Company limits its credit risk associated with cash and cash equivalents by placing its cash with banks and institutions it believes are highly credit worthy and in highly-rated investments.

RAPT THERAPEUTICS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Property and Equipment

Property and equipment consist of computer equipment, laboratory equipment, leasehold improvements and furniture and fixtures, and is recorded at cost, less accumulated depreciation and amortization. Depreciation and amortization are calculated using the straight-line method over the estimated useful lives of the respective assets, generally three to five years. Leasehold improvements are amortized over the shorter of the lease term or the estimated useful life of the improvements.

Depreciation and amortization begin at the time the asset is placed in service. Maintenance and repairs are charged to expense as incurred. Upon sale or retirement of assets, the cost and related accumulated depreciation and amortization are removed from the balance sheet and the resulting gain or loss is reflected in the results of operations.

Impairment of Long-Lived Assets

The Company evaluates its long-lived assets for impairment annually or more frequently whenever events or changes in circumstances indicate that the carrying value of these assets may not be recoverable. Recoverability of these assets is measured by comparing the carrying amount of each asset to the future undiscounted cash flows the asset is expected to generate over its remaining life. If the asset is considered to be impaired, the amount of any impairment is measured as the difference between the carrying value and the fair value of the impaired asset. As of December 31, 2017 and 2018, the Company has not recorded any impairment losses on long-lived assets.

Leases

The Company leases office space and laboratory facilities under non-cancelable operating lease agreements and recognizes related rent expense on a straight-line basis over the term of the lease. Funding of leasehold improvements by the Company's landlord is accounted for as a tenant improvement allowance and recorded as current and non-current deferred rent liabilities and amortized on a straight-line basis as a reduction of rent expense over the term of the lease.

Convertible Preferred Stock

The Company records all shares of convertible preferred stock at their respective fair values on the dates of issuance, less issuance costs. In the event of a change of control of the Company, proceeds received from the sale of such shares will be distributed in accordance with the liquidation preferences set forth in the Company's Amended and Restated Certificate of Incorporation unless the holders of the convertible preferred stock have converted their shares of convertible preferred stock into shares of common stock. Convertible preferred stock is classified outside of stockholders' deficit on the balance sheet as events triggering redemption are not solely within the Company's control.

The Company has not adjusted the carrying values of its convertible preferred stock to the liquidation preferences of such shares because of the uncertainty of whether or when such an event would occur. As of December 31, 2018, it was not probable that such a redemption would occur.

Research and Development Costs

Research and development costs are charged to expense as incurred. Research and development costs consist primarily of salaries and benefits of research and development personnel, costs related to research

activities, preclinical studies, clinical trials, drug manufacturing and allocated overhead and facility-related expenses. The Company accounts for non-refundable advance payments for goods or services that will be used in future research and development activities as expenses when the goods have been received or when the service has been performed rather than when the payment is made.

Clinical trial costs are a component of research and development expenses. The Company expenses costs for its clinical trial activities performed by third parties, including clinical research organizations ("CROs") and other service providers, as they are incurred, based upon estimates of the work completed over the life of the individual study in accordance with associated agreements. The Company uses information it receives from internal personnel and outside service providers to estimate the clinical trial costs incurred.

Stock-Based Compensation

The Company measures employee and director stock-based compensation expense for all stock-based awards based on their grant date fair value using the Black-Scholes option-pricing model. For stock-based awards with service conditions only, stock-based compensation expense is recognized over the requisite service period using the straight-line method. For awards with performance conditions, the Company evaluates the probability of achieving performance conditions at each reporting date. The Company begins to recognize stock-based compensation expense using an accelerated attribution method when it is deemed probable that the performance condition will be met. Forfeitures are recognized as they occur.

Stock-based compensation expense for nonemployee stock-based awards is measured at fair value using the Black-Scholes option-pricing model. The Company recognizes stock-based compensation expense for the estimated fair value of the vested portion of nonemployee awards in its consolidated statements of operations and comprehensive loss. Stock-based compensation expense related to stock option grants to nonemployees is subject to re-measurement over the service period, which approximates the vesting period.

Stock-based compensation expense related to restricted stock awards is determined using the estimated fair value of the Company's common stock on the date of grant. The estimated fair value is amortized as compensation expense over the service period of the award.

Foreign Currency Transactions

The functional currency of RAPT Therapeutics Australia Pty Ltd., our wholly-owned subsidiary, is the Australian dollar. Accordingly, all monetary assets and liabilities of the subsidiary are translated into U.S. dollars at the current period-end exchange rates and non-monetary assets are translated using historical exchange rates. Income and expense elements are remeasured to U.S. dollars using the average exchange rates in effect during the period. Remeasurement gains and losses are recorded as other income (expense).

The Company is subject to foreign currency risk with respect to its clinical contracts denominated in currencies other than the U.S. dollar. Payments on contracts denominated in foreign currencies are made at the spot rate on the day of payment. Changes in the exchange rate between billing dates and payment dates are recorded to other (income), net on the consolidated statements of operations.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit

carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period such tax rate changes are enacted.

The Company recognizes the effect of income tax positions only if those positions are more likely than not to be sustained. Recognized income tax positions are measured at the largest amount that is greater than 50% likely to be realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. Valuation allowances are established when necessary to reduce deferred tax assets to amounts more likely than not to be realized. Interest and penalties related to unrecognized tax benefits are recognized as a component of income tax expense.

Comprehensive Loss

Comprehensive loss includes net loss and certain changes in stockholders' deficit that are excluded from net loss, primarily unrealized losses from foreign currency translation adjustments.

Net Loss Per Share

Basic net loss per share is computed by dividing the net loss by the weighted average number of common shares outstanding during the period, without consideration of potential dilutive securities. Diluted net loss per share is computed by dividing the net loss by the sum of the weighted average number of common shares outstanding during the period plus the potential dilutive effects of potential dilutive shares outstanding during the period. Potential dilutive securities include stock options, warrants and convertible preferred stock. The dilutive effect of stock options and warrants is computed using the treasury stock method and the dilutive effect of convertible preferred stock is calculated using the "if-converted method". For all periods presented, diluted net loss per share is the same as basic net loss per share since the effect of including potential common shares is anti-dilutive.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board ("FASB") or other standard setting bodies and adopted by us as of the specified effective date. Under the Jumpstart Our Business Startups Act of 2012, as amended (the "JOBS Act"), we meet the definition of an emerging growth company, and have elected the extended transition period for complying with new or revised accounting standards pursuant to Section 107(b) of the JOBS Act.

Recently Adopted Accounting Pronouncements

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606), which supersedes the revenue recognition requirements in ASC 605, Revenue Recognition. This standard is based on the principle that revenue is recognized to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. The standard is effective for annual periods beginning after December 15, 2018 using one of two retrospective application methods. The Company has elected to adopt this standard as of January 1, 2018. The adoption of ASU No. 2014-09 did not have any impact on the Company's consolidated financial statements and related disclosures.

RAPT THERAPEUTICS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

In May 2017, the FASB issued ASU No. 2017-09, Compensation—Stock Compensation (Topic 718), Scope of Modification Accounting. This pronouncement provides guidance about which changes to the terms or conditions of a share-based payment award may require an entity to apply modification accounting under Topic 718. This guidance is effective for the Company for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period, with early adoption permitted. The Company adopted this standard on January 1, 2018. The adoption of ASU No. 2017-09 did not have a significant impact on the Company's consolidated financial statements and related disclosures.

Recently Issued Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, Leases. ASU 2016-02 requires lessees to put most leases on their balance sheet while recognizing expense in a manner similar to existing accounting. ASU 2016-02 states that a lessee would recognize a lease liability for the obligation to make lease payments and a right-to-use asset for the right to use the underlying asset for the lease term. The new accounting guidance is effective for the Company for fiscal periods beginning after December 15, 2019 and early adoption is permitted. The Company is currently assessing the impact that the adoption will have on its consolidated financial statements and related disclosures.

In August 2016, the FASB issued ASU No. 2016-15, Statement of Cash Flows (Topic 230), which provides greater clarity to preparers on the treatment of certain items within an entity's statement of cash flows. The new guidance is intended to reduce diversity in practice in how certain transactions are classified in the statement of cash flows. The guidance is effective for the Company on January 1, 2019, and the Company is currently evaluating the impact that the adoption of ASU 2016-15 will have on its consolidated financial statements and related disclosures.

In June 2018, the FASB issued ASU No. 2018-07, Compensation—Stock Compensation (Topic 718): Improvements to Non-Employee Share-Based Payment Accounting as part of the FASB simplification initiative. The new standard expands the scope of Topic 718, allowing the Company to apply the requirements of Topic 718 to certain non-employee awards to acquire goods and services from non-employees. This ASU will be effective for the Company for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020, with early adoption permitted. The Company is currently assessing the timing of adoption and the impact that the adoption of ASU 2018-07 will have on its consolidated financial statements and related disclosures.

In August 2018, the FASB issued ASU No. 2018-13, Fair Value Measurements (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement as part of the FASB's disclosure framework project. This ASU modifies the disclosure requirements on fair value measurements in Topic 820, Fair Value Measurement by removing the requirement to disclose amounts of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy, the policy for timing of transfers between levels, and the valuation process for Level 3 fair value measurements. This ASU also modifies existing disclosure requirements by clarifying that the measurement uncertainty disclosure is to communicate information about the uncertainty in measurement as of the reporting date, and it adds required disclosures for the changes in unrealized gains and losses for the period included in other comprehensive income for recurring Level 3 fair value measurements held at the end of the reporting period, and the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. This ASU will be effective for the Company for fiscal years and interim periods within those fiscal years, beginning after December 15, 2019. The Company is currently assessing the impact of this ASU on its consolidated financial statements.

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3. Fair Value Measurements

Fair value accounting is applied for all financial assets and liabilities that are recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually). Financial instruments include cash and cash equivalents, accounts payable and accrued liabilities that approximate fair value due to their relatively short maturities.

Assets and liabilities recorded at fair value on a recurring basis in the balance sheet are categorized based upon the level of judgment associated with the inputs used to measure their fair values. Fair value is defined as the exchange price that would be received for an asset or an exit price that would be paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. The authoritative guidance on fair value measurements establishes a three-tier fair value hierarchy for disclosure of fair value measurements as follows:

Level 1—Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date;

Level 2—Inputs are observable, unadjusted quoted prices in active markets for similar assets or liabilities, unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the related assets or liabilities; and

Level 3—Unobservable inputs that are significant to the measurement of the fair value of the assets or liabilities that are supported by little or no market data.

Financial assets subject to fair value measurements on a recurring basis comprise money market funds that are measured using Level 1 inputs. The money market funds subject to fair value measurements at December 31, 2017 and 2018 were $47.5 million and $63.7 million, respectively, and are included in cash and cash equivalents.

4. Property and Equipment

Property and equipment consists of the following (in thousands):

	December 31,	
	2017	2018
Laboratory equipment	$ 4,603	$ 5,466
Leasehold improvements	598	2,989
Computer equipment	244	308
Furniture and fixtures	237	365
Total property and equipment	5,682	9,128
Less accumulated depreciation and amortization	(3,769)	(4,969)
Property and equipment, net	$ 1,913	$ 4,159

Depreciation and amortization expenses were $1.4 million and $1.2 million for the years ended December 31, 2017 and 2018, respectively.

RAPT THERAPEUTICS, INC.
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5. Accrued Expenses

Accrued expenses consist of the following (in thousands):

	December 31, 2017	December 31, 2018
Accrued clinical expenses	$ 39	$ 519
Accrued compensation	1,019	1,433
Accrued professional and consulting services	317	182
Accrued property and equipment	—	202
Accrued lab supplies	70	80
Other	47	72
Total accrued expenses	$1,492	$2,488

6. Commitments

The Company enters into contracts in the normal course of business with CROs for preclinical studies and clinical trials. These agreements provide for notice of termination by either party and are, therefore, cancelable contracts.

In May 2015, the Company entered into an operating lease for 30,376 square feet of laboratory and office facilities in South San Francisco, California, which expires in May 2022 and provides for tenant improvement allowances of $0.8 million. In April 2018, the Company amended the lease agreement to include an additional 6,378 square feet of laboratory and office space increasing the total leased premises to 36,754 square feet. The lease amendment extended the lease term to November 2026, and contains scheduled rent increases over the lease term and an option for the Company to extend the lease for an additional five-year term. The lease amendment contains a tenant improvement allowance of $1.4 million that the Company used in 2018 toward $2.4 million in total leasehold improvements, which is amortized over the remaining lease term.

In February 2019, the Company entered into an agreement to sublease its facility lease of 6,378 square feet of laboratory and office space with a related party. See Note 14 for further discussion.

As of December 31, 2018, future minimum non-cancelable lease payments, net of sublease rental income, are as follows (in thousands):

Year ending December 31:	
2019	$ 1,432
2020	1,639
2021	1,969
2022	2,038
Thereafter	8,687
Total minimum lease payments	$15,765

The terms of the lease agreement provide for rental payments on a monthly basis and on a graduated scale. The Company recognizes rent expense on a straight-line basis over the lease period and has accrued for rent expense incurred but not paid. Rent expense includes certain monthly charges that do not represent non-cancelable obligations, as defined. These costs are determined based on actual charges incurred. In addition,

tenant improvement allowances recorded are amortized as a reduction to rent expense on a straight-line basis over the lease term. Rent expense was $1.6 million and $1.8 million in the years ended December 31, 2017 and 2018, respectively.

From time to time, the Company may be subject to various legal proceedings and claims arising in the ordinary course of business. The Company assesses contingencies to determine the degree of probability and range of possible loss for potential accrual in its financial statements. An estimated loss contingency is accrued in the financial statements if it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. The Company is not subject to any current pending legal matters or claims and no contingency loss had been accrued.

7. Clinical Trial Collaboration and Supply Agreement

In November 2018, the Company entered into a clinical trial collaboration and supply agreement with Merck (known as MSD outside the United States and Canada), through an affiliate, under which the Company will conduct a clinical trial evaluating FLX475 in combination with KEYTRUDA® (pembrolizumab), Merck's anti-PD-1 therapy, in patients with advanced cancers. The Company is the sponsor of the clinical trial, and Merck will supply KEYTRUDA® for use in the clinical trial.

8. Related-Party Promissory Notes

In August 2015 and June 2016, the Company entered into limited recourse promissory notes with the Company's chief executive officer and chief operating officer for the purchase of restricted common stock. The principal amount of the loans was $0.3 million and $0.3 million, respectively. The loans are secured by the shares of common stock of the Company held by the individuals. The loans accrue interest at a rate of 1.82% and 1.41% per annum, respectively, and are due upon the earlier of voluntary termination of services to the Company, filing by the Company of its first registration statement with the Securities and Exchange Commission under the Securities Act of 1933 or sale of substantially all of the Company's assets. As of December 31, 2017 and 2018, the total outstanding balance under these notes, including accrued interest, was approximately $0.6 million and $0.6 million, respectively. The notes are recorded within stockholders' deficit.

9. Convertible Preferred Stock and Stockholders' Deficit

Convertible preferred stock

In June 2018, the Company completed a subsequent closing of Series C convertible preferred stock financing at $2.2925 per share for $29.9 million in gross proceeds. Additionally, in December 2018, the Company completed a $22.6 million Series C-2 convertible preferred stock financing at $2.2925 per share, and between January 2019 and March 2019, the Company completed subsequent closings of Series C-2 convertible preferred stock financing at $2.2925 per share for $7.0 million.

As of December 31, 2017, convertible preferred stock consisted of the following (in thousands, except share amounts):

	Shares Authorized	Shares Issued and Outstanding	Net Carrying Value	Aggregate Liquidation Preference
Series A	37,509,105	37,509,105	$ 28,861	$ 37,509
Series B	25,000,000	25,000,000	49,926	50,000
Series C	26,240,224	13,054,679	29,856	29,928
Total convertible preferred stock	88,749,329	75,563,784	$ 108,643	$ 117,437

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As of December 31, 2018, convertible preferred stock consisted of the following (in thousands, except share amounts):

	Shares Authorized	Shares Issued and Outstanding	Net Carrying Value	Aggregate Liquidation Preference
Series A	37,509,105	37,509,105	$ 28,861	$ 37,509
Series B	25,000,000	25,000,000	49,926	50,000
Series C	26,109,363	26,109,363	59,770	59,856
Series C-2	15,400,000	9,873,412	22,554	22,635
Total convertible preferred stock	104,018,468	98,491,880	$ 161,111	$ 170,000

The rights, privileges, and preferences of the convertible preferred stock are as follows:

Conversion

Each share of Series A, Series B, Series C and Series C-2 convertible preferred stock are initially convertible, at the option of the holder at any time, into shares of common stock as determined by dividing the applicable original issue price for such series by the applicable conversion price for such series, subject to adjustment in the event of any stock splits, stock dividends, combinations, subdivisions or similar recapitalization affecting such shares, and subject also to adjustment for certain dilutive issuances. Conversion of all outstanding convertible stock is automatic upon (i) the closing of a firm commitment underwritten public offering resulting in at least $30,000,000 in gross proceeds to the Company, prior to underwriting commissions and expenses, provided that the public offering price is at least $13.7550 per share, as adjusted for any stock dividends, combinations, splits, recapitalizations and the like or (ii) the election of the holders of 55% or more of the then outstanding shares of preferred stock.

Dividends

The holders of shares of Series A, Series B, Series C and Series C-2 convertible preferred stock shall be entitled to receive dividends, when, as and if declared by the Board of Directors, at the rate per annum of $0.08, $0.16, $0.18, $0.18 per share, respectively, subject to adjustment in the event of any stock splits, stock dividends, combinations, subdivisions or similar recapitalization affecting such shares.

Accrued dividends are payable when, as and if declared by the Board of Directors, and are not cumulative. After payment of the above dividend, any additional dividends shall be distributed among all holders of common and preferred stock in proportion to the number of shares of common stock into which the representative shares are convertible.

Voting

Each holder of shares of Series A, Series B, Series C and Series C-2 convertible preferred stock is entitled to one vote for each share of common stock into which such shares of preferred stock are convertible, has voting rights and powers equal to the voting rights and powers of the common stock and shall vote together with the common stock on all matters as to which holders of common stock have the right to vote, in each case, except as provided by law or by other provisions of the Company's Restated Certificate of Incorporation.

Election of board of directors

As long as at least 6,000,000 shares of preferred stock are outstanding, as adjusted for any stock dividends, combinations, splits, recapitalizations and the like, the holders of shares of Series A, Series B, Series C and Series C-2

convertible preferred stock, voting as a separate class, are entitled to elect two members of the Board of Directors. The holders of shares of common stock, voting as a separate class, are entitled to elect two members of the Board of Directors. The holders of the shares of preferred stock and common stock, voting together as a single class, and on an as-converted basis, are entitled to elect all remaining members of the Board of Directors.

Protective provisions

As long as at least 6,000,000 shares of preferred stock are outstanding, as adjusted for any stock dividends, combinations, splits, recapitalizations and the like, the Company shall first obtain the approval by vote or written consent of the holders of at least 65% of the then outstanding shares of preferred stock, voting together as a single class and not as a separate series, and on an as-converted basis with respect to: (i) consummation of liquidation event or effect any other merger or consolidation, (ii) amend, alter or repeal any provision of the Company's certificate of incorporation of bylaws, (iii) increase or decrease the total number of authorized shares of common stock or preferred stock or designated shares of any series of preferred stock, (iv) authorize, issue or obligate the Company to issue any equity security having preference over any series of preferred stock, (v) redeem, purchase or otherwise acquire any share or shares of preferred stock or common stock, (vi) change the authorized number of directors of the Company, (vii) increase the number of shares of common stock reserved under any employee equity incentive plan, (viii) permit any subsidiary to sell or issue equity securities, (ix) pay or declare any dividend on any shares of capital stock and (x) authorize, issue or obligate the Company to issue any debt security if the aggregate indebtedness exceeds $5,000,000.

Liquidation preferences

In the event of any voluntary or involuntary liquidation, dissolution or winding-up of the Company or other "Liquidation Event" (as defined in the Company's Restated Certificate of Incorporation), the holders of shares of Series A, Series B, Series C and Series C-2 convertible preferred stock shall be entitled to be paid an amount equal to the original issue price per share, subject to adjustment in the event of any stock splits, stock dividends, combinations, subdivisions or similar recapitalization affecting such shares together with any dividends declared but unpaid, prior to the payment of any distributions to the holders of common stock. If, upon the occurrence of such event, the assets and funds distributed among the holders of the Series A, Series B, Series C and Series C-2 convertible preferred stock are insufficient to permit the payment to such holders of the full aforesaid preferential amounts, then the entire assets and funds of the Company legally available for distribution are to be distributed ratably among the holders of the Series A, Series B, Series C and Series C-2 convertible preferred stock.

All holders of Series A, Series B, Series C and Series C-2 convertible preferred stock shall be deemed to have converted if, as a result of an actual conversion, such holder would receive, in the aggregate, a greater amount than the amount that would be distributed to such holder if such holder did not convert such shares of Series A, Series B, Series C and Series C-2 convertible preferred stock into common stock.

Classification

The Company has classified the convertible preferred stock outside of permanent equity on the balance sheet as these shares can be redeemed upon the occurrence of certain change in control events that are outside of the Company's control, including liquidation, sale or transfer of the Company. The Company has not adjusted the carrying values of the convertible preferred stock to the liquidation preferences of such shares because it is uncertain whether or when an event would occur that would obligate the Company to pay the liquidation preferences to holders of shares of redeemable convertible preferred stock, and at the balance sheet dates these circumstances were not probable. Subsequent adjustments to the carrying values of the liquidation preferences will be made only when it becomes probable that such a liquidation event will occur.

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10. Common Stock

The holders of the Company's common stock have one vote for each share of common stock held by them. Holders of shares of the Company's common stock are entitled to dividends when, as, and if declared by the Board of Directors, subject to the prior rights of the holders of convertible preferred stock. As of December 31, 2017 and 2018, no dividends had been declared.

As of December 31, 2018, the Company had reserved the following shares of common stock, on an as-converted basis, for future issuance as follows:

Series A convertible preferred stock outstanding	6,251,502
Series B convertible preferred stock outstanding	4,166,663
Series C convertible preferred stock outstanding	4,351,554
Series C-2 convertible preferred stock outstanding	2,566,666
Options issued and outstanding	768,239
Options available for future grants	693,879
Total	18,798,503

11. Stock Option Plan

In 2015, the Company adopted the FLX Bio, Inc. 2015 Stock Plan (the 2015 Plan) for eligible employees, officers, directors, advisors, and consultants, which provides for the grant of incentive and non-statutory stock options and restricted shares of common stock. Terms of the stock option agreements, including vesting requirements, are determined by the Board of Directors, subject to the provisions of the 2015 Plan. Options granted generally vest over four years and expire no later than ten years from the date of grant. The estimated fair value of the underlying common stock is determined by the Board of Directors. The exercise price of the incentive stock options must be equal to or greater than the estimated fair value of the underlying common stock on the date of grant.

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The following summarizes option activity under the 2015 Plan:

	Shares Available	Number of Shares Outstanding	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (in thousands)
Balances at December 31, 2016	539,900	142,037	$ 1.56	9.47	$ 426
Stock options authorized	540,554	—			
Stock options granted	(306,804)	306,804	1.99		
Stock options exercised	—	(50,034)	1.91		
Unvested common shares repurchased	37,893	—	1.06		
Stock options forfeited	50,147	(50,147)	1.84		
Balances at December 31, 2017	861,690	348,660	$ 1.85	9.02	$ 526
Stock options authorized	250,000	—			
Stock options granted	(497,417)	497,417	6.18		
Stock options exercised	—	(17,390)	1.93		
Unvested common shares repurchased	19,158	—	1.39		
Stock options forfeited	60,448	(60,448)	2.74		
Balances at December 31, 2018	693,879	768,239	$ 4.62	8.84	$ 1,291
Vested and expected to vest at December 31, 2018		768,223		8.84	$ 1,291
Exercisable at December 31, 2018		137,159		7.99	$ 580

The aggregate intrinsic values of options outstanding, exercisable, vested and expected to vest were calculated as the difference between the exercise price of the options and the estimated fair value of the Company's common stock, as determined by the Board of Directors, as of December 31, 2017 and 2018.

During the year ended December 31, 2017, the Company granted 0.3 million stock options to purchase shares of common stock with a weighted-average grant date fair value of $3.60 per share and a weighted-average exercise price of $1.99 per share. The weighted average grant date fair value of the common stock was $4.38 per share. The grant date fair value of those awards was $1.2 million. During the year ended December 31, 2018, the Company granted 0.5 million stock options to purchase shares of common stock with a weighted-average grant date fair value of $4.32 per share and a weighted-average exercise price of $6.18 per share. The grant date fair value of those awards was $2.1 million. The intrinsic value of options exercised for the years ended December 31, 2017 and 2018 was $0.2 million and $0.1 million, respectively. The fair value of the 0.3 million and 0.3 million stock options vested during 2017 and 2018 was $0.6 million and $0.9 million, respectively.

The Company had 33,333 shares and 25,000 shares of performance-based stock options outstanding as of December 31, 2017 and 2018, respectively. The grant date fair value of the award was $0.2 million. As of December 31, 2017 and 2018, the Company has not recognized any of the related stock-based compensation expense, as vesting of the awards was not determined to be probable.

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Employee stock option valuation

The assumptions used to value employee and director stock option awards granted under the 2015 Plan during the years ended December 31, 2017 and 2018, using the Black-Scholes option pricing model, were as follows:

	Year Ended December 31,	
	2017	2018
Fair value of common stock	$3.84 - $6.18	$6.18 - $6.30
Expected term (in years)	5.96 - 6.07	5.67 - 6.08
Volatility	81.50% - 83.06%	80.69% - 81.48%
Risk-free interest rate	1.75% - 2.22%	2.62% - 2.88%
Dividend yield	—	—

The fair value of the shares of common stock underlying stock options has historically been determined by the Company's Board of Directors. Because there has been no public market for the Company's common stock, the Board of Directors has determined fair value of the common stock at the time of grant of the option by considering a number of objective and subjective factors including important developments in the Company's operations, valuations performed by independent third parties, sales of convertible preferred stock, actual operating results and financial performance, the conditions in the biotechnology industry and the economy in general, the stock price performance and volatility of comparable public companies and the lack of liquidity of the Company's common stock, among other factors.

In determining the fair value of the options granted, the Company uses the Black-Scholes option-pricing model and assumptions discussed below. Each of these inputs is subjective and generally requires significant judgment to determine.

Expected term

The expected term represents the period that the Company's 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 Company has very limited historical information to develop reasonable expectations about future exercise patterns and post-vesting employment termination behavior for its stock option grants.

Expected volatility

Since the Company is privately held and does not have any trading history for its common stock, the expected volatility was estimated based on the average volatility for comparable publicly traded biopharmaceutical companies over a period, where available, equal to the expected term of the stock option grants. The comparable companies were chosen based on their similar size, life cycle stage or area of specialty.

Risk-free interest rate

The risk-free interest rate is based on the U.S. Treasury zero coupon issues in effect at the time of grant for periods corresponding with the expected term of the options.

Expected dividend

The Company has never paid dividends on its common stock and has no plans to pay dividends on its common stock. Therefore, the Company used an expected dividend yield of zero.

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Stock options granted to nonemployees

Stock-based compensation related to stock options granted to non-employees is recognized as the services are rendered. The assumptions used to value non-employee stock option awards granted under the 2015 Plan during the years ended December 31, 2017 and 2018, using the Black-Scholes option pricing model, were as follows:

	Year Ended December 31,	
	2017	2018
Expected term (in years)	7.34 - 10.00	6.34 - 10.00
Volatility	78.92% - 86.03%	78.29% - 85.47%
Risk-free interest rate	1.32% - 2.57%	1.32% - 3.19%
Dividend yield	—	—

During the years ended December 31, 2017 and 2018, the Company granted 33,332 and 4,166 options to nonemployee consultants and recognized related expense of $0.1 million and $0.1 million, respectively.

Early exercise of stock options

The terms of the 2015 Plan permit option holders to exercise stock options before they are vested, subject to certain limitations. Such unvested shares are subject to repurchase by the Company at the original exercise price in the event the option holder's service to the Company is terminated either voluntarily or involuntarily. As a result of early exercises under the 2015 Plan, approximately 0.4 million and 0.2 million shares were subject to repurchase as of December 31, 2017 and 2018, respectively. The Company treats cash received from the exercise of unvested options as a refundable deposit and classifies such amounts as a liability in its balance sheet. As of December 31, 2017 and 2018, the Company included cash received for the early exercise of unvested options of $0.5 million and $0.2 million, respectively, in other current liabilities. Amounts included in liabilities are transferred into common stock and additional paid-in capital as the shares vest, which is generally over a period of 48 months and may include a one-year cliff.

Stock-based compensation expense

Total stock-based compensation recognized for both employees and non-employees was as follows (in thousands):

	Year Ended December 31,	
	2017	2018
Research and development	394	542
General and administrative	322	628
Total stock-based compensation expense	$ 716	$ 1,170

As of December 31, 2018, unrecognized stock-based compensation cost related to outstanding unvested stock options that are expected to vest was $1.3 million. This unrecognized stock-based compensation cost is expected to be recognized over 1.72 years.

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12. Income Taxes

The following table presents domestic and foreign components of income (loss) before income taxes for the periods presented (in thousands):

	December 31,	
	2017	2018
United States	$(29,114)	$(36,033)
Foreign	—	(113)
	$(29,114)	$(36,146)

A reconciliation of the statutory U.S. federal rate and effective rate is as follows:

	December 31(1)	
	2017	2018
Federal tax	34.0%	21.0%
State, net of federal benefit	—	—
Stock based compensation	(1.0)	(0.6)
R&D credit	2.0	3.68
Change in valuation allowance	(8.0)	(24.13)
Other	—	0.05
Re-measurement of deferred tax assets	(27.0)	—
Income tax expense	0.0%	0.0%

Note:
(1) For the year ended December 31, 2017, the statutory tax rate was 34%. For the year ended December 31, 2018, as a result of Tax Reform, the statutory tax rate was decreased to 21%.

The Company has not recorded income tax expense or benefit through December 31, 2018 because of the Company's history of operating losses. The Company has incurred net operating losses for all periods since inception. The Company has not reflected any benefit of such net operating loss carryforwards in the accompanying financial statements. The Company has established a full valuation allowance against its deferred tax assets due to the uncertainty surrounding the realization of such assets.

The Tax Cuts and Job Act (the "Act") was enacted on December 22, 2017. The Act reduces the top U.S. federal corporate tax rate from 34% to 21%, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, changes the rules related to uses and limitations of net operating loss carryforwards created in tax years beginning after December 31, 2017, allows for immediate expensing of fixed asset additions beginning after September 27, 2017 and creates new taxes on certain foreign-sourced earnings. In 2017, the Company was not subject to a one-time transition tax as no foreign accumulated earnings and profits existed.

The Tax Act created a new requirement that global intangible low-taxed income ("GILTI") earned by the Company's foreign wholly-owned subsidiary must be included in gross U.S. taxable income. While the Tax Act provides for a modified territorial tax system, beginning in 2018, GILTI provisions will be applied providing an incremental tax on low taxed foreign income. The GILTI provisions require the Company to include in its U.S. income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary's tangible assets. During 2018, the Company made an accounting policy election to treat taxes related to GILTI as a current period expense when incurred.

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We applied the guidance in Staff Accounting Bulletin No. 118 to reasonably estimate the effects of the 2017 Act and recorded provisional amounts in our financial statements as of December 31, 2017. In 2017, as a result of the signing of the Act, the Company recorded a $7.9 million reduction in our deferred tax assets due to the decrease in the Federal rate along with a corresponding reduction of our valuation allowance. In 2018, we completed our determination of the accounting implications of the 2017 Act and recorded no adjustments to the provisional amounts.

The components of the Company's deferred tax assets are as follows (in thousands):

	December 31	
	2017	2018
Net operating loss carryforwards	$ 13,635	$ 20,810
Federal and state tax credits	2,035	3,378
Depreciation and amortization	60	105
Accrued liabilities and reserves	313	448
Stock-based compensation	25	50
Gross deferred tax assets	$ 16,068	$ 24,791
Valuation allowance	(16,068)	(24,791)
Net deferred taxes	$ —	$ —

Realization of deferred tax assets is dependent upon future taxable income, if any. The Company has established a valuation allowance to offset deferred tax assets as of December 31, 2017 and 2018, due to the uncertainty of realizing future tax benefits from its net operating loss carryforwards and other deferred tax assets. The valuation allowance increased by approximately $2.4 million and $8.7 million during the years ended December 31, 2017 and 2018, respectively. The increase in the valuation allowance is mainly related to the increase in net operating loss carryforwards incurred during the respective taxable years

As of December 31, 2017, and 2018, the Company had federal net operating loss carryforwards of approximately $60.9 million and $95.0 million, respectively. The federal NOL carryforwards generated during and after fiscal 2018 totaling $34.1 million are carried forward indefinitely, while all others along with the federal tax credit carryforwards, expire in years beginning in 2035. As of December 31, 2017 and 2018, the Company had approximately $12.1 million and $12.1 million of state net operating loss carryforwards, respectively, which begin to expire in 2035 and are available to offset future taxable income. As of December 31, 2017, and 2018, the Company had research and development tax credit carryforwards of approximately $1.7 million and $2.7 million, and approximately $1.4 million and $2.3 million, available to reduce future federal and state income taxes, respectively. Moreover, as of December 31, 2017 and 2018, the Company recorded federal and state reserves of $0.4 million and $0.7 million and approximately $0.3 and $0.6 million, respectively, as uncertain tax positions as of December 31, 2018. If not utilized, the federal credit carryforwards will begin expiring in 2035. The state credits carry forward indefinitely.

Federal and state laws impose substantial restrictions on the utilization of net operating loss and tax credit carryforwards in the event of an ownership change for tax purposes, as defined in Section 382 of the Internal Revenue Code. As a result of such ownership changes, the Company's ability to realize the potential future benefit of tax losses and tax credits that existed at the time of the ownership change may be significantly reduced. The Company's deferred tax asset and related valuation allowance would be reduced as a result. The Company has not yet performed a Section 382 study to determine the amount of reduction, if any. The annual limitation may result in the expiration of net operating losses and credits before utilization. Under the new enacted law, the carryforward period of net operating losses generated from 2018 forward is indefinite; however,

the carryforward period for net operating losses generated prior to 2018 remains the same. Therefore, the annual limitation may still result in the expiration of certain net operating losses and tax credit carryforwards before their utilization.

A reconciliation of the beginning and ending amounts of unrecognized tax benefits for the years ended December 31, 2017 and 2018 resulting primarily from research and development tax credits claimed on the Company's annual tax returns were as follows (in thousands):

	December 31	
	2017	2018
Balance at beginning of year	$360	$ 789
Additions on tax positions related to prior years	23	19
Additions on tax positions related to current year	406	473
Balance at end of year	$789	$1,281

The Company does not expect that its uncertain tax positions will materially change in the next twelve months. The reversal of uncertain tax benefits would not impact the Company's effective tax rate as the Company continues to maintain a full valuation allowance against its deferred tax assets. In accordance with ASC 740, the Company would classify interest and penalties related to uncertain tax positions in income tax expense, if applicable. There was no interest expense or penalties related to unrecognized tax benefits through December 31, 2018.

The Company files income tax returns in the United States, the State of California and the State of Colorado. The Company is not currently under examination by income tax authorities in federal, state or other jurisdictions. All tax returns remain open for examination by federal and state authorities.

13. Net Loss Per Share

Historical net loss per share

The following table sets forth the computation of the basic and diluted net loss per share of the years ended December 31, 2017 and 2018 (in thousands, except share and per share data):

	Year Ended December 31,	
	2017	2018
Numerator:		
Net loss	$ (29,115)	$ (36,147)
Denominator:		
Weighted average common shares outstanding	856,451	866,348
Less: weighted-average unvested restricted common stock subject to repurchase	(250,269)	(137,691)
Less: weighted-average unvested early exercised common shares subject to repurchase	(174,504)	(106,368)
Weighted-average shares used to compute net loss per common share, basic and diluted	431,679	622,289
Net loss per share, basic and diluted	$ (67.45)	$ (58.09)

RAPT THERAPEUTICS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Potentially dilutive securities that were not included in the diluted per share calculations because they would be anti-dilutive were as follows:

	December 31,	
	2017	2018
Convertible preferred stock	12,593,942	16,415,281
Common stock options issued and outstanding	861,690	693,879
Total	13,455,632	17,109,160

Unaudited pro forma net loss per share

The following table presents the computation of pro forma basic and diluted net loss per share (in thousands, except share and per share data):

	For the Year Ended December 31, 2018
Numerator:	
Net loss	$ (36,147)
Denominator:	
Weighted-average shares used to compute net loss per common share, basic and diluted	622,289
Pro forma adjustments to reflect:	
Assumed conversion of convertible preferred stock	13,838,797
Weighted-average shares used to compute net loss per share, basic and diluted	14,461,086
Pro forma net loss per share, basic and diluted	$ (2.50)

14. Subsequent Events

In February 2019, the Company entered into an agreement to sublease its facility lease of 6,378 square feet of laboratory and office space with a related party. The sublease has an initial term of eighteen months, expiring August 2020, with an option to extend by an additional six months.

In March 2019, the Company completed a subsequent closing of Series C-2 convertible preferred stock financing at $2.2925 per share with gross proceeds of $7.0 million.

Management has reviewed and evaluated subsequent events through May 24, 2019, the date the audited financial statements were available to be issued. No subsequent events have been identified for disclosure, other than the subsequent events noted above.

RAPT THERAPEUTICS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share data)
(Unaudited)

	December 31, 2018 (Note 2)	September 30, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 63,798	$ 48,310
Prepaid expenses and other current assets	1,264	2,914
Total current assets	65,062	51,224
Property and equipment, net	4,159	4,002
Other assets	389	3,143
Total assets	$ 69,610	$ 58,369
Liabilities, Convertible Preferred Stock and Stockholders' Deficit		
Current liabilities:		
Accounts payable	$ 1,771	$ 1,590
Accrued expenses	2,488	3,410
Other current liabilities	384	457
Total current liabilities	4,643	5,457
Deferred rent, net of current portion	969	2,219
Commitments		
Convertible preferred stock	161,111	175,490
Stockholders' equity (deficit):		
Preferred stock	—	—
Common stock	1	1
Additional paid-in capital	22,441	23,923
Related party promissory note for the purchase of common stock	(598)	—
Accumulated other comprehensive income/(loss)	(4)	13
Accumulated deficit	(118,953)	(148,734)
Total stockholders' (deficit) equity	(97,113)	(124,797)
Total liabilities, convertible preferred stock and stockholders' (deficit)	$ 69,610	$ 58,369

The accompanying notes are an integral part of these condensed consolidated financial statements.

RAPT THERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except share and per share data)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2019	2018	2019
Operating expenses:				
Research and development	$ 9,181	$ 8,582	$ 23,387	$ 24,720
General and administrative	1,364	1,733	3,889	6,094
Total operating expenses	10,545	10,315	27,276	30,814
Loss from operations	10,545	10,315	27,276	30,814
Other income:				
Other income, net	261	344	559	1,033
Net loss	$ (10,284)	$ (9,971)	$ (26,717)	$ (29,781)
Other comprehensive income/(loss)	(4)	(15)	(4)	17
Total comprehensive loss	$ (10,288)	$ (9,956)	$ (26,721)	$ (29,764)
Net loss per share, basic and diluted	$ (15.90)	$ (12.41)	$ (45.11)	$ (40.15)
Weighted average number of shares used in computing net loss per share, basic and diluted	646,800	803,229	592,237	741,711

The accompanying notes are an integral part of these condensed consolidated financial statements.

RAPT THERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT
(In thousands, except share amounts)
(Unaudited)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Related Party Promissory Notes for the Purchase of Common Stock	Accumulated Deficit	Accumulated Other Comprehensive Income/(Loss)	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount					
Balance at December 31, 2017	75,563,784	$108,643	880,191	$ 1	$ 21,005	$ (605)	$ (82,806)	$ —	$ (62,405)
Issuance cost related to Series C convertible preferred stock	—	(4)	—	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options, net of repurchase	—	—	5,159	—	90	—	—	—	90
Repurchase of common stock from related party	—	—	(8,333)	—	—	17	—	—	17
Interest on promissory notes from related parties for purchase of common stock	—	—	—	—	—	(3)	—	—	(3)
Stock-based compensation	—	—	—	—	294	—	—	—	294
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—
Net loss	—	—	—	—	—	—	(8,232)	—	(8,232)
Balance at March 31, 2018	75,563,784	$108,639	877,017	$ 1	$ 21,389	$ (591)	$ (91,038)	$ —	$ (70,239)
Issuance cost related to Series C convertible preferred stock, net of issuance costs	13,054,684	29,918	—	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options, net of repurchase	—	—	(5,849)	—	47	—	—	—	47
Repurchase of common stock from related party	—	—	—	—	—	—	—	—	—
Interest on promissory notes from related parties for purchase of common stock	—	—	—	—	—	(2)	—	—	(2)
Stock-based compensation	—	—	—	—	286	—	—	—	286
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—
Net loss	—	—	—	—	—	—	(8,204)	—	(8,204)
Balance at June 30, 2018	88,618,468	$138,557	871,169	$ 1	$ 21,722	$ (593)	$ (99,242)	$ —	$ (78,112)
Issuance cost related to Series C convertible preferred stock, net of issuance costs	—	—	—	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options, net of repurchase	—	—	(2,277)	—	60	—	—	—	60
Repurchase of common stock from related party	—	—	—	—	—	—	—	—	—
Interest on promissory notes from related parties for purchase of common stock	—	—	—	—	—	(3)	—	—	(3)
Stock-based compensation	—	—	—	—	295	—	—	—	295
Foreign currency translation adjustment	—	—	—	—	—	—	—	(4)	(4)
Net loss	—	—	—	—	—	—	(10,284)	—	(10,284)
Balance at September 30, 2018	88,618,468	$138,557	868,892	$ 1	$ 22,077	$ (596)	$ (109,526)	$ (4)	$ (88,048)

The accompanying notes are an integral part of these condensed consolidated financial statements.

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Related Party Promissory Notes for the Purchase of Common Stock	Accumulated Deficit	Accumulated Other Comprehensive Income/(Loss)	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount					
Balance at December 31, 2018	98,491,880	$161,111	878,413	$ 1	$ 22,441	$ (598)	$ (118,953)	$ (4)	$ (97,113)
Issuance of Series C-2 convertible preferred stock, net of issuance costs	3,039,908	6,947	—	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options, net of repurchase	—	—	3,685	—	66	—	—	—	66
Repurchase of common stock from related party	—	—	(53,649)	—	—	109	—	—	109
Interest on promissory notes from related parties for purchase of common stock	—	—	—	—	—	(2)	—	—	(2)
Stock-based compensation	—	—	—	—	377	—	—	—	377
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—
Net loss	—	—	—	—	—	—	(9,188)	—	(9,188)
Balance at March 31, 2019	101,531,788	$168,058	828,449	$ 1	$ 22,884	$ (491)	$ (128,141)	$ (4)	$ (105,751)
Issuance of Series C-2 convertible preferred stock, net of issuance costs	3,271,537	7,451	—	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options, net of repurchase	—	—	13,996	—	34	—	—	—	34
Repurchase of common stock from related party	—	—	(29,686)	—	—	65	—	—	65
Paydown of promissory notes from related parties for purchase of common stock	—	—	—	—	—	73	—	—	73
Forgiveness of promissory notes from related parties for purchase of common stock	—	—	—	—	—	353			353
Stock-based compensation	—	—	—	—	347	—	—	—	347
Foreign currency translation adjustment	—	—	—	—	—	—	—	2	2
Net loss	—	—	—	—	—	—	(10,622)	—	(10,622)
Balance at June 30, 2019	104,803,325	$175,509	812,759	$ 1	$ 23,265	$ —	$ (138,763)	$ (2)	$ (115,499)
Issuance of Series C-2 convertible preferred stock, net of issuance costs	—	(19)	—	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options, net of repurchase	—	—	122,281	—	227	—	—	—	227
Stock-based compensation	—	—	—	—	431	—	—	—	431
Foreign currency translation adjustment	—	—	—	—	—	—	—	15	15
Net loss	—	—	—	—	—	—	(9,971)	—	(9,971)
Balance at September 30, 2019	104,803,325	$175,490	935,040	$ 1	$ 23,923	$ —	$ (148,734)	$ 13	$ (124,797)

The accompanying notes are an integral part of these condensed consolidated financial statements.

RAPT THERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)
(Unaudited)

	Nine Months Ended September 30,	
	2018	2019
Operating activities		
Net loss	$(26,717)	$(29,781)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	943	1,011
Stock-based compensation expense	874	1,155
Loss on disposal of capital equipment	54	9
Gain on foreign currency translation	(4)	(17)
Noncash interest income (loss), net	(8)	(20)
Changes in operating assets and liabilities:		
Prepaid expenses and other long-term assets	(400)	(4,404)
Accounts payable and accrued liabilities	1,516	2,187
Net cash used in operating activities	(23,742)	(29,786)
Investing activities		
Purchase of property and equipment	(1,846)	(863)
Net cash used in investing activities	(1,846)	(863)
Financing activities		
Proceeds from the sale of convertible preferred stock, net of issuance costs	29,914	14,379
Proceeds from issuance of common stock, net of repurchases	198	782
Net cash provided by financing activities	30,112	15,161
Net increase in cash and cash equivalents	(4,524)	(15,488)
Cash and cash equivalents at beginning of period	47,517	63,798
Cash and cash equivalents at end of period	$ 52,041	$ 48,310
Supplemental disclosures of non-cash investing and financing information		
Deferred offering costs included in accounts payable and accrued expenses	$ —	$ 454
Property and equipment included in accounts payable	$ 409	$ —
Forgiveness of promissory notes from related party for purchase of common stock	$ —	$ 382

The accompanying notes are an integral part of these consolidated financial statements.

RAPT THERAPEUTICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Organization and Liquidity Risks

Description of the Business

RAPT Therapeutics, Inc. ("RAPT" or the "Company") is a clinical-stage, immunology-based biopharmaceutical company focused on discovering, developing and commercializing oral small molecule therapies for patients with significant unmet needs in oncology and inflammatory diseases. Utilizing its proprietary drug discovery and development engine, the Company develops highly selective small molecules that are designed to modulate the critical immune responses underlying these diseases. The Company changed its name from FLX Bio, Inc. to RAPT Therapeutics, Inc. on May 21, 2019. The Company is located in South San Francisco, California.

Initial Public Offering

On November 4, 2019, the Company completed its initial public offering ("IPO"). The Company's Registration Statement on Form S-1 (File Nos. 333-232572) relating to the IPO was declared effective by the Securities and Exchange Commission ("SEC") on October 30, 2019. The shares began trading on the Nasdaq Global Market on October 31, 2019. The Company issued 3,000,000 shares of its common stock at an offering price at $12.00 per share. Immediately prior to the closing of the Company's IPO on November 4, 2019, all outstanding shares of the Company's convertible preferred stock converted into 17,467,184 shares of the Company's common stock. Shortly following the close of the offering, the underwriters exercised their option to purchase an additional 427,360 shares at the IPO price per share. In aggregate, the shares issued in the offering generated approximately $33.8 million in net proceeds after deducting underwriting discounts and other offering related costs.

In connection with the completion of its IPO, on November 4, 2019, the Company's certificate of incorporation was amended and restated to provide for 500,000,000 authorized shares of common stock with a par value of $0.0001 per share and 50,000,000 authorized shares of preferred stock with a par value of $0.0001 per share.

Liquidity and Management Plans

The accompanying condensed consolidated financial statements have been prepared assuming that the Company will continue as a going concern. However, since inception, the Company has incurred net losses and negative cash flows from operations and such losses are expected to continue for the foreseeable future. As of September 30, 2019, the Company had an accumulated deficit of $148.7 million, cash and cash equivalents of $48.3 million and working capital of $45.8 million.

Management plans to continue to incur substantial costs in order to conduct research and development activities and additional capital will be needed to undertake these activities. The Company intends to raise such capital through the issuance of additional equity, borrowings, and strategic alliances with other companies. However, if such arrangements are not available at adequate levels or on acceptable terms, the Company would be required to significantly reduce operating expenses and delay or reduce the scope of or eliminate some of its development programs. Management believes that the Company's current cash and cash equivalents, including the net proceeds of approximately $33.8 million from the closing of its IPO in November 2019 as described above, will provide sufficient funds to enable the Company to meet its obligations for at least twelve months from the filing date of this report.

RAPT THERAPEUTICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP") for interim financial information and pursuant to Article 10 of Regulation S-X of the Securities Act of 1933, as amended (Securities Act). Accordingly, they do not include all of the information and notes required by U.S. GAAP for complete financial statements. These unaudited condensed consolidated financial statements include only normal and recurring adjustments that the Company believes are necessary to fairly state the Company's financial position and the results of its operations and cash flows. Interim-period results are not necessarily indicative of results of operations or cash flows for a full year or any subsequent interim period. The condensed balance sheet at December 31, 2018 has been derived from the audited financial statements at that date but does not include all disclosures required by U.S. GAAP for complete financial statements. Because all of the disclosures required by U.S. GAAP for complete financial statements are not included herein, these unaudited condensed consolidated financial statements and the notes accompanying them should be read in conjunction with the Company's audited consolidated financial statements included in the Registration Statement on Form S-1 and related Prospectus dated October 30, 2019 filed with the SEC pursuant to Rule 424(b)(4) of the Securities Act of 1933, as amended ("Prospectus").

Reverse Stock Split

On July 19, 2019, the Company filed an amendment to the Company's amended and restated certificate of incorporation to effect a reverse split of shares of the Company's common stock on a one-for-six basis (the "Reverse Stock Split"). In connection with the Reverse Stock Split, the conversion ratio for the Company's outstanding convertible preferred stock was proportionately adjusted such that the common stock issuable upon conversion of such preferred stock was decreased in proportion to the Reverse Stock Split. The par value of the common stock was not adjusted as a result of the Reverse Stock Split. All references to common stock, options to purchase common stock, early exercised options, share data, per share data, convertible preferred stock (to the extent presented on an as-converted to common stock basis) and related information contained in these consolidated financial statements have been retrospectively adjusted to reflect the effect of the Reverse Stock Split for all periods presented.

Deferred Offering Costs

Deferred offering costs consisting of direct legal, accounting, printing and other fees and costs related to the IPO are capitalized. The deferred offering costs were reclassified to additional paid-in capital upon the effectiveness of the IPO in November 2019. As of September 30, 2019, $2.8 million of deferred offering costs were capitalized and included in other assets.

Net Loss Per Share

Basic net loss per share is computed by dividing the net loss by the weighted average number of common shares outstanding during the period, without consideration of potential dilutive securities. Diluted net loss per common share is computed by dividing the net loss by the sum of the weighted average number of common shares outstanding during the period plus the potential dilutive effects of potential dilutive securities outstanding during the period calculated in accordance with the treasury stock method. Diluted net loss per share is the same as basic net loss per share since the effect of potentially dilutive securities is anti-dilutive.

RAPT THERAPEUTICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board ("FASB") or other standard setting bodies and adopted by us as of the specified effective date. Unless otherwise discussed, the impact of recently issued standards that are not yet effective will not have a material impact on our condensed consolidated financial statements upon adoption. Under the Jumpstart Our Business Startups Act of 2012, as amended (the "JOBS Act"), we meet the definition of an emerging growth company, and have elected the extended transition period for complying with new or revised accounting standards pursuant to Section 107(b) of the JOBS Act.

Recently Issued Accounting Pronouncement Not Yet Adopted

In February 2016, the FASB issued ASU No. 2016-02, Leases. ASU 2016-02 requires lessees to put most leases on their balance sheet while recognizing expense in a manner similar to existing accounting. ASU 2016-02 states that a lessee would recognize a lease liability for the obligation to make lease payments and a right-to-use asset for the right to use the underlying asset for the lease term. The new accounting guidance is effective for the Company for fiscal periods beginning after December 15, 2019 and early adoption is permitted. The Company is currently assessing the impact that the adoption will have on its consolidated financial statements and related disclosures.

In June 2016, the FASB issued ASU No. 2016-13 Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. ASU 2016-13 amended guidance on reporting credit losses for assets held at amortized cost basis and available-for-sale debt securities. For available-for-sale debt securities, credit losses will be presented as an allowance rather than as a write-down. This standard is effective for the Company's fiscal year beginning after December 31, 2020. Early adoption is permitted for all entities. The Company is currently assessing the impact that the adoption of ASU 2016-13 will have on its condensed consolidated financial statements and related disclosures.

In August 2016, the FASB issued ASU No. 2016-15, Statement of Cash Flows (Topic 230), which provides greater clarity to preparers on the treatment of certain items within an entity's statement of cash flows. ASU 2016-15 is intended to reduce diversity in practice in how certain transactions are classified in the statement of cash flows. The guidance is effective for the Company on January 1, 2019, and the Company is currently evaluating the impact that the adoption of ASU 2016-15 will have on its consolidated financial statements and related disclosures.

In June 2018, the FASB issued ASU No. 2018-07, Compensation—Stock Compensation (Topic 718): Improvements to Non-Employee Share-Based Payment Accounting as part of the FASB simplification initiative. ASU 2018-07 expands the scope of Topic 718, allowing the Company to apply the requirements of Topic 718 to certain non-employee awards to acquire goods and services from non-employees. This ASU will be effective for the Company for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020, with early adoption permitted. The Company is currently assessing the impact that the adoption of ASU 2018-07 will have on its consolidated financial statements and related disclosures.

In August 2018, the FASB issued ASU No. 2018-13, Fair Value Measurements (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement as part of the FASB's disclosure framework project. ASU 2018-13 modifies the disclosure requirements on fair value measurements in Topic 820, Fair Value Measurement by removing the requirement to disclose amounts of and reasons for

transfers between Level 1 and Level 2 of the fair value hierarchy, the policy for timing of transfers between levels, and the valuation process for Level 3 fair value measurements. This ASU also modifies existing disclosure requirements by clarifying that the measurement uncertainty disclosure is to communicate information about the uncertainty in measurement as of the reporting date, and it adds required disclosures for the changes in unrealized gains and losses for the period included in other comprehensive income for recurring Level 3 fair value measurements held at the end of the reporting period, and the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. This ASU will be effective for the Company for fiscal years and interim periods within those fiscal years, beginning after December 15, 2019. The Company is currently assessing the impact of this ASU on its consolidated financial statements.

In November 2018, the FASB issued ASU No. 2018-18, Collaborative Arrangements (ASC 808): Clarifying the Interaction between ASC 808 and ASC 606, which clarifies that certain transactions between collaborative arrangement participants should be accounted for as revenue under ASC 606 when the collaborative arrangement participant is a customer in the context of a unit of account. In those situations, all the guidance in ASC 606 should be applied, including recognition, measurement, presentation and disclosure requirements. ASU 2018-18 adds unit-of-account guidance in ASC 808 to align with the guidance in ASC 606 (that is, a distinct good or service) when an entity is assessing whether the collaborative arrangement or a part of the arrangement is within the scope of ASC 606, and requires that in a transaction with a collaborative arrangement participant that is not directly related to sales to third parties, presenting the transaction together with revenue recognized under ASC 606 is precluded if the collaborative arrangement participant is not a customer. ASU 2018-18 will be effective for the Company for fiscal years beginning after December 15, 2020, and interim periods within fiscal years beginning after December 15, 2021. The Company is currently assessing the impact of this ASU on its condensed consolidated financial statements.

3. Fair Value Measurements

Fair value accounting is applied for all financial assets and liabilities that are recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually). Financial instruments include cash and cash equivalents, accounts payable and accrued liabilities that approximate fair value due to their relatively short maturities.

Assets and liabilities recorded at fair value on a recurring basis in the balance sheet are categorized based upon the level of judgment associated with the inputs used to measure their fair values. Fair value is defined as the exchange price that would be received for an asset or an exit price that would be paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. The authoritative guidance on fair value measurements establishes a three-tier fair value hierarchy for disclosure of fair value measurements as follows:

Level 1—Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date;

Level 2—Inputs are observable, unadjusted quoted prices in active markets for similar assets or liabilities, unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the related assets or liabilities; and

Level 3—Unobservable inputs that are significant to the measurement of the fair value of the assets or liabilities that are supported by little or no market data.

RAPT THERAPEUTICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Financial assets subject to fair value measurements on a recurring basis comprise money market funds that are measured using Level 1 inputs. The money market funds subject to fair value measurements at September 30, 2019 and December 31, 2018 were $48.3 million and $63.8 million, respectively, and are included in cash and cash equivalents.

4. Property and Equipment

Property and equipment consisted of the following (in thousands):

	December 31, 2018	September 30, 2019
Laboratory equipment	$ 5,466	$ 5,832
Leasehold improvements	2,989	3,294
Computer equipment	308	316
Furniture and fixtures	365	394
Total property and equipment	9,128	9,836
Less accumulated depreciation and amortization	(4,969)	(5,834)
Property and equipment, net	$ 4,159	$ 4,002

Depreciation and amortization expenses were $0.3 million and $0.3 million for the three months ended September 30, 2019 and 2018, respectively, and $1.0 million and $0.9 million for the nine months ended September 30, 2019 and 2018, respectively.

5. Accrued Expenses

Accrued expenses consist of the following (in thousands):

	December 31, 2018	September 30, 2019
Accrued clinical expenses	$ 519	$ 973
Accrued compensation	1,433	1,604
Accrued professional and consulting services	182	662
Accrued property and equipment	202	—
Accrued lab supplies	80	78
Other	72	93
Total accrued expenses	$ 2,488	$ 3,410

6. Related-Party Promissory Notes

In August 2015 and June 2016, the Company entered into limited recourse promissory notes with the Company's chief executive officer and chief operating officer for the purchase of restricted common stock. The principal amount of the loan with the Company's chief executive officer was $0.3 million (the "CEO Note"). The principal amount of the loan with the Company's chief operating officer was $0.3 million (the "COO Note"). The loans were secured by the shares of common stock of the Company held by the individuals. The loans accrued interest at a rate of 1.82% and 1.41% per annum, respectively, and were due upon the earlier of voluntary termination of services to the Company, filing by the Company of its first registration statement with the SEC under the Securities Act of 1933, or sale of substantially all of the Company's assets. As of December 31, 2018,

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the total outstanding balances under these notes, including accrued interest, were approximately $0.6 million. In June 2019, the Company forgave $0.4 million, which was the entire amount of principal and accrued interest due on the CEO Note.

In March 2018, the Board of Directors reduced the number of performance-based options of its former chief operating officer by 8,333 shares resulting in a $17,000 reduction to the principal of the COO Note. In March 2019, the chief operating officer resigned from the Company and, under the terms of a separation agreement, there were 63,019 vested shares and 28,645 unvested shares subject to repurchase. In March 2019, the Company reduced the principal on the COO Note by $0.1 million relating to the unvested shares, which shares were cancelled and returned to the option pool. In July 2019, the Company repurchased 29,686 vested shares from the chief operating officer in exchange for canceling $0.1 million of principal and interest on the COO Note. The Company received cash proceeds of $0.1 million as payment for the remaining principal and interest on the COO Notes relating to the remaining 33,333 vested shares.

7. Convertible Preferred Stock and Stockholders' Deficit

Convertible preferred stock

In June 2018, the Company closed a subsequent sale of Series C convertible preferred stock at $2.2925 per share for $29.9 million in gross proceeds. In December 2018, the Company closed the sale of Series C-2 convertible preferred stock at $2.2925 per share for $22.6 million in gross proceeds, and between January 2019 and June 2019, the Company closed additional sales of Series C-2 convertible preferred stock at $2.2925 per share for $14.4 million in gross proceeds.

As of December 31, 2018, convertible preferred stock consisted of the following (in thousands, except share amounts):

	Shares Authorized	Shares Issued and Outstanding	Net Carrying Value	Aggregate Liquidation Preference
Series A	37,509,105	37,509,105	$ 28,861	$ 37,509
Series B	25,000,000	25,000,000	49,926	50,000
Series C	26,109,363	26,109,363	59,770	59,856
Series C-2	15,400,000	9,873,412	22,554	22,635
Total convertible preferred stock	104,018,468	98,491,880	$ 161,111	$ 170,000

As of September 30, 2019, convertible preferred stock outstanding consisted of the following (in thousands, except share amounts):

	Shares Authorized	Shares Issued and Outstanding	Net Carrying Value	Aggregate Liquidation Preference
Series A	37,509,105	37,509,105	$ 28,861	$ 37,509
Series B	25,000,000	25,000,000	49,926	50,000
Series C	26,109,363	26,109,363	59,770	59,856
Series C-2	29,271,007	16,184,857	36,933	37,104
Total convertible preferred stock	117,889,475	104,803,325	$ 175,490	$ 184,469

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Immediately prior to the closing of the Company's IPO on November 4, 2019, all outstanding shares of the Company's convertible preferred stock converted into 17,467,184 shares of the Company's common stock.

8. Common Stock

The holders of the Company's common stock have one vote for each share of common stock held by them. Holders of shares of the Company's common stock are entitled to dividends when, as and if declared by the Board of Directors. No dividends had been declared as of September 30, 2019 or December 31, 2018. As of September 30, 2019 and December 31, 2018, 935,040 shares and 878,413 shares of common stock were outstanding, respectively.

As of September 30, 2019, the Company had reserved the following shares of common stock, on an as-converted basis, for future issuance as follows:

Series A convertible preferred stock outstanding	6,251,502
Series B convertible preferred stock outstanding	4,166,663
Series C convertible preferred stock outstanding	4,351,554
Series C-2 convertible preferred stock outstanding	2,697,465
Options issued and outstanding	943,610
Options available for future grants	461,904
Total	18,872,698

9. Stock Option Plan

The Company's 2019 Equity Incentive Plan (the "2019 Plan") which was adopted by the Company's Board of Directors on June 27, 2019 and approved by the Company's stockholders on July 18, 2019, became effective upon the consummation of the IPO. Upon the effectiveness of the 2019 Plan, the Company's 2015 Stock Plan (the "2015 Plan") terminated and no further grants may be made thereunder. However, the 2015 Plan will continue to govern the terms and conditions of the outstanding awards previously granted thereunder. A summary of the Company's stock option activity under the 2015 Plan for the nine months ended September 30, 2019 is as follows:

	Shares Available	Number of Shares Outstanding	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (in thousands)
Balances at December 31, 2018	693,879	768,239	$ 4.62	8.84	$ 1,291
Stock options authorized	—	—			
Stock options granted	(416,919)	416,919	8.63		
Stock options exercised	—	(141,707)	4.37		
Unvested common shares repurchased	85,103	—	1.02		
Stock options forfeited	99,841	(99,841)	5.07		
Balances at September 30, 2019	461,904	943,610	$ 6.82	8.79	$ 6,416

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Employee stock option valuation

The assumptions used to value employee and director stock option awards granted under the 2015 Plan during the three and nine months ended September 30, 2019 and 2018, using the Black-Scholes option pricing model, were as follows:

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2018	2019	2018	2019
Fair value of common stock	$6.18	$13.62	$6.18	$13.62
Expected term (in years)	5.96 - 6.08	5.01 - 6.07	5.67 - 6.08	5.01 - 6.08
Volatility	81.37% - 81.48%	83.29% - 84.81%	83.69% - 81.48%	83.00% - 84.81%
Risk-free interest rate	2.88%	1.58% - 1.62%	2.62% - 2.88%	1.58% - 2.23%
Dividend yield	—	—	—	—

Stock options granted to nonemployees

Stock-based compensation related to stock options granted to non-employees is recognized as services are rendered. The assumptions used to value non-employee stock option awards granted under the 2015 Plan during the three and nine months ended September 30, 2019 and 2018, using the Black-Scholes option pricing model, were as follows:

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2018	2019	2018	2019
Expected term (in years)	6.60 - 9.70	5.60 - 9.99	6.60 - 9.70	5.60 - 9.99
Volatility	80.12% - 81.73%	82.30% - 83.79%	80.02% - 82.32%	81.43% - 83.79%
Risk-free interest rate	2.75% - 3.02%	1.44% - 2.02%	2.39% - 3.02%	1.44% - 2.67%
Dividend yield	—	—	—	—

Early exercise of stock options

The terms of the 2015 Plan permit option holders to exercise stock options before they are vested, subject to certain limitations. Such unvested shares are subject to repurchase by the Company at the original exercise price in the event the option holder's service to the Company is terminated either voluntarily or involuntarily. As a result of early exercises under the 2015 Plan, approximately 0.1 million and 0.2 million shares were subject to repurchase as of September 30, 2019 and December 31, 2018, respectively. The Company treats cash received from the exercise of unvested options as a refundable deposit and classifies such amounts as a liability in its balance sheet. As of September 30, 2019 and December 31, 2018, the Company included cash received for the early exercise of unvested options of $0.1 million and $0.2 million, respectively, in other current liabilities. Amounts included in liabilities are transferred into common stock and additional paid-in capital as the shares vest, which is generally over a period of 48 months and may include a one-year cliff.

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Stock-based compensation expense

Total stock-based compensation recognized for both employees and non-employees was as follows (in thousands):

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2018	2019	2018	2019
Research and development	$ 131	$ 212	$ 404	$ 611
General and administrative	164	219	470	544
Total stock-based compensation expense	$ 295	$ 431	$ 874	$ 1,155

10. Income Taxes

The Company did not record a provision for income taxes for the nine months ended September 30, 2019 and 2018 because all of its taxable income is expected to be fully offset by net operating losses generated in prior years. In addition, the Company's deferred tax assets continue to be subject to a full valuation allowance.

11. Net Loss Per Share

Net loss per share

The following table sets forth the computation of the basic and diluted net loss per share for the nine months ended September 30, 2018 and 2019 (in thousands, except share and per share data):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2019	2018	2019
Numerator:				
Net loss	$ (10,284)	$ (9,971)	$ (26,717)	$ (29,781)
Denominator:				
Weighted average common shares outstanding	867,565	838,961	864,855	822,644
Less: weighted-average unvested restricted common stock subject to repurchase	(124,514)	(19,097)	(150,868)	(45,451)
Less: weighted-average unvested common shares subject to repurchase	(96,251)	(16,635)	(121,750)	(35,482)
Weighted-average shares used to compute net loss per share, basic and diluted	646,800	803,229	592,237	741,711
Net loss per share, basic and diluted	$ (15.90)	$ (12.41)	$ (45.11)	$ (40.15)

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Outstanding potentially dilutive securities that were not included in the diluted per share calculations because they would be anti-dilutive

	As of September 30,	
	2018	2019
Convertible preferred stock	88,618,468	104,803,325
Common stock options issued and outstanding	768,406	943,610
Total	89,386,874	105,746,935

Immediately prior to the closing of the Company's IPO on November 4, 2019, all outstanding shares of the Company's convertible preferred stock converted into 17,467,184 shares of the Company's common stock. For the nine months ended September 30, 2019, with the assumed conversion of the convertible preferred stock, the basic and diluted unaudited pro forma net loss was $1.69 per share.

12. Subsequent Events

On December 1, 2019, the Company entered into a Collaboration and License Agreement ("Agreement") with Hanmi Pharmaceutical Co., LTD. for FLX475. Under the terms of the Agreement, the Company will receive $10.0 million in an upfront and expected near-term milestone payment. Additionally, the Company will be eligible to receive additional contingent payments of up to $108.0 million upon the achievement of specified milestones, consisting of up to $48.0 million upon the achievement of development milestones and up to $60.0 million upon the achievement of sales milestones, as well as double-digit royalties on future net sales of FLX475 in specified territories.

2,500,000 Shares

Common Stock

PROSPECTUS

BMO Capital Markets

Wells Fargo Securities

UBS Investment Bank

Cantor

February 6, 2020