UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2019

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission File Number: 001-38443

UNUM THERAPEUTICS INC.
(Exact name of registrant as specified in its charter)

Delaware	**46-5308248**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**
200 Cambridge Park Drive, Suite 3100 Cambridge, Massachusetts	**02140**
(Address of principal executive offices)	**(Zip code)**

(617) 945-5576
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

Large accelerated filer ☐	Accelerated filer ☐
Non-accelerated filer ☒	Smaller reporting company ☒
	Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered

Common Stock, $0.001 Par Value	**UMRX**	**The Nasdaq Global Select Market**

As of April 30, 2019, the registrant had 30,118,822 shares of common stock, $0.001 par value per share, outstanding.

FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements, which reflect our current views with respect to, among other things, our operations and financial performance. All statements other than statements of historical facts contained in this Quarterly Report on Form 10-Q, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plan, objectives of management and expected market growth are forward-looking statements. You can identify these forward-looking statements by the use of words such as “outlook,” “believes,” “expects,” “potential,” “continues,” “may,” “will,” “should,” “seeks,” “approximately,” “predicts,” “intends,” “plans,” “estimates,” “anticipates” or the negative version of these words or other comparable words. Such forward-looking statements are subject to various risks and uncertainties. Accordingly, there are or will be important factors that could cause actual outcomes or results to differ materially from those indicated in these statements. We believe these factors include but are not limited to those described under “Risk Factors” and include, among other things:

- the success, cost, and timing of our product development activities and clinical trials;
- our ability to obtain and maintain regulatory approval for our ACTR087 and ACTR707 product candidates and any other product candidates we may develop, and any related restrictions, limitations, and/or warnings in the label of an approved product candidate;
- the potential for our identified research priorities to advance our ACTR and BOXR platform;
- the ability to license additional intellectual property relating to our product candidates from third-parties and to comply with our existing license agreements and collaboration agreements;
- the ability and willingness of our third-party research institution collaborators to continue research and development activities relating to our product candidates;
- our ability to commercialize our products in light of the intellectual property rights of others;
- our ability to obtain funding for our operations, including funding necessary to complete further development and commercialization of our product candidates;
- the scalability and commercial viability of our manufacturing methods and processes;
- the commercialization of our product candidates, if approved;
- our plans to research, develop, and commercialize our product candidates;
- the potential benefits of our existing collaboration with Seattle Genetics and our ability to attract other collaborators with development, regulatory, and commercialization expertise;
- future agreements with third parties in connection with the commercialization of our product candidates and any other approved product;
- the size and growth potential of the markets for our product candidates, and our ability to serve those markets;
- the rate and degree of market acceptance of our product candidates;
- the pricing and reimbursement of our product candidates, if approved;
- regulatory developments in the United States and foreign countries;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;
- the success of competing therapies that are or may become available;
- our ability to attract and retain key scientific or management personnel;
- the accuracy of our estimates regarding expenses, future revenue, capital requirements, and needs for additional financing;
- our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act;
- our use of the proceeds from the initial public offering and the concurrent private placement; and
- our expectations regarding our ability to obtain and maintain intellectual property protection for our product candidates.

These factors should not be construed as exhaustive and should be read in conjunction with the other cautionary statements that are included in this Quarterly Report on Form 10-Q. The forward-looking statements contained in this Quarterly Report on Form 10-Q are made as of the date of this Quarterly Report on Form 10-Q, and we undertake no obligation to publicly update or review any forward-looking statement, whether as a result of new information, future developments or otherwise.

Unum Therapeutics Inc.
Table of Contents

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited)

UNUM THERAPEUTICS INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share amounts)
(Unaudited)

	March 31, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 59,114	$ 55,671
Marketable securities	7,989	22,923
Accounts receivable	2,040	1,668
Prepaid expenses and other current assets	757	740
Total current assets	69,900	81,002
Operating lease, right-of-use asset	6,316	—
Property and equipment, net	2,963	3,251
Restricted cash	1,255	1,255
Other assets	846	419
Total assets	$ 81,280	$ 85,927
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 1,836	$ 1,519
Accrued expenses and other current liabilities	6,067	5,477
Operating lease liability	1,507	—
Deferred revenue	16,935	17,949
Total current liabilities	26,345	24,945
Deferred rent	—	748
Operating lease liability, net of current portion	5,645	—
Total liabilities	31,990	25,693
Commitments and contingencies (Note 8)		
Stockholders' equity:		
Preferred stock, $0.001 par value; 10,000,000 shares authorized; no shares issued or outstanding	—	—
Common stock, $0.001 par value; 150,000,000 shares authorized; 30,118,822 shares and 30,057,970 shares issued and outstanding at March 31, 2019 and December 31, 2018, respectively	30	30
Additional paid-in capital	153,012	152,275
Accumulated other comprehensive loss	(2)	(12)
Accumulated deficit	(103,750)	(92,059)
Total stockholders' equity	49,290	60,234
Total liabilities and stockholders' equity	$ 81,280	$ 85,927

The accompanying notes are an integral part of these consolidated financial statements.

UNUM THERAPEUTICS INC.
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except share and per share amounts)
(Unaudited)

	Three Months Ended March 31,	
	2019	2018
Collaboration revenue	$ 3,053	$ 2,220
Operating expenses:		
Research and development	12,403	8,142
General and administrative	2,491	1,064
Total operating expenses	14,894	9,206
Loss from operations	(11,841)	(6,986)
Other income (expense):		
Interest income	150	81
Other income, net	—	170
Total other income, net	150	251
Net loss	(11,691)	(6,735)
Accretion of redeemable convertible preferred stock to redemption value	—	(16)
Net loss attributable to common stockholders	$ (11,691)	$ (6,751)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.39)	$ (0.66)
Weighted average common shares outstanding, basic and diluted	30,083,006	10,204,591
Comprehensive loss:		
Net loss	$ (11,691)	$ (6,735)
Other comprehensive income:		
Unrealized gains on marketable securities, net of tax of $0	10	9
Total other comprehensive income	10	9
Comprehensive loss	$ (11,681)	$ (6,726)

The accompanying notes are an integral part of these consolidated financial statements.

UNUM THERAPEUTICS INC.
CONSOLIDATED STATEMENTS OF REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)
(in thousands, except share amounts)
(Unaudited)

	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount				
Balances at December 31, 2018	—	$ —	30,057,970	$ 30	$152,275	$ (12)	$ (92,059)	$ 60,234
Issuance of common stock upon exercise of stock options	—	—	60,852	—	11	—	—	11
Stock-based compensation expense	—	—	—	—	726	—	—	726
Unrealized gains on marketable securities	—	—	—	—	—	10	—	10
Net loss	—	—	—	—	—	—	(11,691)	(11,691)
Balances at March 31, 2019	—	$ —	30,118,822	$ 30	$153,012	$ (2)	$ (103,750)	$ 49,290

	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount				
Balances at December 31, 2017	20,771,850	$77,151	10,201,690	$ 10	$ 2,499	$ (16)	$ (51,339)	$ (48,846)
Adjustment to retained earnings for change in accounting policy	—	—	—	—	—	—	(6,188)	$ (6,188)
Issuance of common stock upon exercise of stock options	—	—	6,368	—	28	—	—	28
Stock-based compensation expense	—	—	—	—	479	—	—	479
Unrealized gains on marketable securities	—	—	—	—	—	9	—	9
Accretion of redeemable convertible preferred stock to redemption value	—	16	—	—	(16)	—	—	(16)
Net loss	—	—	—	—	—	—	(6,735)	(6,735)
Balances at March 31, 2018	20,771,850	$77,167	10,208,058	$ 10	$ 2,990	$ (7)	$ (64,262)	$ (61,269)

The accompanying notes are an integral part of these consolidated financial statements.

UNUM THERAPEUTICS INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(Unaudited)

	Three Months Ended March 31,	
	2019	2018
Cash flows from operating activities:		
Net loss	$(11,691)	$ (6,735)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization expense	330	314
Stock-based compensation expense	726	479
Realized (gains) losses on sales of marketable securities	1	—
Net amortization (accretion) of premiums (discounts) on marketable securities	(49)	4
Non-cash interest expense	—	5
Changes in operating assets and liabilities:		
Accounts receivable	(372)	(771)
Prepaid expenses and other current assets	(17)	(668)
Operating lease, right-of-use asset	334	—
Other assets	(427)	(419)
Accounts payable	317	1,341
Accrued expenses and other current liabilities	696	(908)
Deferred rent	—	(4)
Operating lease liability	(352)	—
Deferred revenue	(1,014)	(619)
Net cash used in operating activities	(11,518)	(7,981)
Cash flows from investing activities:		
Purchases of property and equipment	(42)	(75)
Maturities and sales of marketable securities	14,992	6,000
Net cash provided by investing activities	14,950	5,925
Cash flows from financing activities:		
Proceeds from issuance of common stock upon stock option exercises	11	28
Payments of initial public offering costs	—	(563)
Net cash provided by (used in) financing activities	11	(535)
Net increase (decrease) in cash, cash equivalents and restricted cash	3,443	(2,591)
Cash, cash equivalents and restricted cash at beginning of period	56,926	29,600
Cash, cash equivalents and restricted cash at end of period	$ 60,369	$27,009
Supplemental disclosure of noncash investing and financing information:		
Purchases of property and equipment included in accounts payable	$ —	$ 108
Deferred offering costs included in accounts payable and accrued expenses	$ —	$ 956
Accretion of redeemable convertible preferred stock to redemption value	$ —	$ 16

The accompanying notes are an integral part of these consolidated financial statements.

UNUM THERAPEUTICS INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Nature of the Business and Basis of Presentation

Unum Therapeutics Inc. ("Unum" or the "Company") is a clinical-stage biopharmaceutical company focused on the development and commercialization of novel immunotherapy products designed to harness the power of a patient's immune system to cure cancer. The Company's proprietary technologies include Antibody-Coupled T cell Receptor ("ACTR"), a universal, engineered cell therapy that is intended to be used in combination with a wide range of tumor-specific antibodies to target different tumor types, and Bolt-On Chimeric Receptor ("BOXR"), a novel approach to engineered T cell therapy designed specifically for solid tumor applications. Unum was incorporated in March 2014 under the laws of the State of Delaware.

The Company is subject to risks and uncertainties common to early-stage companies in the biotechnology industry, including, but not limited to, development by competitors of new technological innovations, dependence on key personnel, protection of proprietary technology, compliance with government regulations and the ability to secure additional capital to fund operations. Product candidates currently under development will require significant additional research and development efforts, including extensive preclinical and clinical testing and regulatory approval prior to commercialization. These efforts require significant amounts of additional capital, adequate personnel and infrastructure and extensive compliance-reporting capabilities. Even if the Company's drug development efforts are successful, it is uncertain when, if ever, the Company will realize significant revenue from product sales.

On April 3, 2018, the Company completed an initial public offering ("IPO") of its common stock and issued and sold 5,770,000 shares of common stock at a public offering price of $12.00 per share, resulting in net proceeds of $61.5 million after deducting underwriting discounts and commissions and other offering costs. In addition, Seattle Genetics, Inc. ("Seattle Genetics") purchased from the Company, concurrently with the IPO in a private placement, $5.0 million of shares of common stock at a price per share equal to the initial public offering price, or 416,666 shares (the "concurrent private placement"). Upon closing of the IPO, the Company's outstanding redeemable convertible preferred stock automatically converted into shares of common stock. On April 25, 2018, the Company issued and sold an additional 215,000 shares of its common stock at the IPO price of $12.00 per share pursuant to the underwriters' partial exercise of their option to purchase additional shares of common stock, resulting in additional net proceeds of $2.4 million after deducting underwriting discounts and commissions.

The accompanying consolidated financial statements have been prepared on the basis of continuity of operations, realization of assets and the satisfaction of liabilities and commitments in the ordinary course of business. The Company has incurred recurring losses since inception, including net losses attributable to the Company of $11.7 million for the three months ended March 31, 2019 and $34.5 million for the year ended December 31, 2018. As of March 31, 2019, the Company had an accumulated deficit of $103.8 million. The Company expects to continue to generate operating losses in the foreseeable future. As of May 13, 2019, the issuance date of the interim consolidated financial statements, the Company expects that its cash, cash equivalents and marketable securities will be sufficient to fund its operating expenses and capital expenditure requirements through at least 12 months from the issuance date of the interim consolidated financial statements, without considering available borrowings under the Company's loan and security agreement.

The Company will ultimately need to seek additional funding through equity offerings, debt financings, collaborations, licensing arrangements and other marketing and distribution arrangements, partnerships, joint ventures, combinations or divestitures of one or more of its businesses. The Company may not be able to obtain financing on acceptable terms, or at all, and the Company may not be able to enter into collaborative arrangements or divest its assets. The terms of any financing may adversely affect the holdings or the rights of the Company's stockholders. Arrangements with collaborators or others may require the Company to relinquish rights to certain of its technologies or product candidates. If the Company is unable to obtain funding, the Company could be forced to delay, reduce or eliminate its research and development programs or commercialization efforts, which could adversely affect its business prospects.

The Company's consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP").

The accompanying consolidated financial statements include the accounts of the Company and its wholly owned subsidiary. All intercompany accounts and transactions have been eliminated in consolidation.

2. Summary of Significant Accounting Policies

Unaudited Interim Financial Information

The consolidated balance sheet at December 31, 2018 was derived from audited financial statements but does not include all disclosures required by GAAP. The accompanying unaudited consolidated financial statements as of March 31, 2019 and for the three months ended March 31, 2019 and 2018 have been prepared by the Company pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC") for interim financial statements. Certain information and footnote disclosures normally included in the financial statements prepared in accordance with GAAP have been condensed or omitted pursuant to such rules and regulations. These consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and the notes thereto for the year ended December 31, 2018 included in the Company's Annual Report on Form 10-K, File No. 001-38443 on file with the SEC. In the opinion of management, all adjustments, consisting only of normal recurring adjustments necessary for a fair statement of the Company's financial position as of March 31, 2019 and results of operations for the three months ended March 31, 2019 and 2018 and cash flows for the three months ended March 31, 2019 and 2018 have been made. The Company's results of operations for the three months ended March 31, 2019 are not necessarily indicative of the results of operations that may be expected for the year ending December 31, 2019.

Concentrations of Credit Risk and of Significant Suppliers

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash and cash equivalents. The Company maintains most of its cash and cash equivalents at three accredited financial institutions. The Company does not believe that it is subject to unusual credit risk beyond the normal credit risk associated with commercial banking relationships.

The Company is dependent on third-party vendors for its product candidates. In particular, the Company relies, and expects to continue to rely, on a small number of vendors to manufacture supplies and process its product candidates for its development programs. These programs could be adversely affected by a significant interruption in the manufacturing process.

Cash Equivalents

The Company considers all highly liquid investments with original maturities of three months or less at the date of purchase to be cash equivalents.

Fair Value Measurements

Certain assets and liabilities are carried at fair value under GAAP. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

- Level 1—Quoted prices in active markets for identical assets or liabilities.
- Level 2—Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.
- Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

The Company's cash equivalents and marketable securities are carried at fair value, determined according to the fair value hierarchy described above (see Note 3). The carrying values of the Company's accounts receivable, accounts payable and accrued expenses approximate their fair values due to the short-term nature of these assets and liabilities.

Marketable Securities

The Company's marketable securities, consisting of debt securities, are classified as available-for-sale and are reported at fair value. Unrealized gains and losses on available-for-sale debt securities are reported as a component of accumulated other comprehensive income (loss) in stockholders' equity (deficit). Realized gains and losses and declines in value determined to be other than temporary are based on the specific identification method and are included as a component of other income (expense), net in the consolidated statements of operations and comprehensive loss. The Company classifies its marketable securities with maturities beyond one year as short-term, based on their highly liquid nature and because such marketable securities are available for current operations.

The Company evaluates its marketable securities with unrealized losses for other-than-temporary impairment. When assessing marketable securities for other-than-temporary declines in value, the Company considers such factors as, among other things, how significant the decline in value is as a percentage of the original cost, how long the market value of the investment has been less than its original cost, the Company's ability and intent to retain the investment for a period of time sufficient to allow for any anticipated recovery in fair value and market conditions in general. If any adjustment to fair value reflects a decline in the value of the investment that the Company considers to be "other than temporary," the Company reduces the investment to fair value through a charge to the statement of operations and comprehensive loss. No such adjustments were necessary during the periods presented.

Leases

The Company accounts for a contract as a lease when it has the right to control the asset for a period of time while obtaining substantially all of the assets' economic benefits. The Company determines the initial classification and measurement of its operating right-of-use assets and operating lease liabilities at the lease commencement date, and thereafter if modified. The lease term includes any renewal options that the Company is reasonably assured to exercise. The Company's policy is to not record leases with an original term of twelve months or less on its consolidated balance sheets. The Company's only existing lease is for office space.

The right-of-use asset represents the right to use the leased asset for the lease term. The lease liability represents the present value of the lease payments under the lease. The present value of lease payments is determined by using the interest rate implicit in the lease, if that rate is readily determinable; otherwise, the Company uses its estimated secured incremental borrowing rate for that lease term.

Lease payments included in the measurement of the lease liability consist of the following: the fixed noncancelable lease payments, payments for optional renewal periods where it is reasonably certain the renewal period will be exercised, and payments for early termination options unless it is reasonably certain the lease will not be terminated early.

Leases may contain rent escalation clauses and variable lease payments that require additional rental payments in later years of the term, including payments based on an index or inflation rate. Payments based on the change in an index or inflation rate, or payments based on a change in the Company's portion of the operating expenses, including real estate taxes and insurance, are not included in the initial lease liability and are recorded as a period expense when incurred. The operating leases may include an option to renew the lease term for various renewal periods and/or to terminate the leases early. These options to exercise the renewal or early termination clauses in the Company's operating leases were not reasonably certain of exercise as of the date of adoption and these have not been included in the determination of the initial lease liability or operating lease expense.

Rent expense for operating leases is recognized on a straight-line basis over the reasonably assured lease term based on the total lease payments and is included in operating expense in the consolidated statements of operations and comprehensive loss. For finance leases, any interest expense is recognized using the effective interest method and is included within interest expense. The Company has no financing leases.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates, assumptions and judgments that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements and the reported amounts of revenue and expenses during the reporting periods. Significant estimates, assumptions and judgments reflected in these condensed consolidated financial statements include, but are not limited to, revenue, the accrual of research and development expenses and the valuation of stock-based awards. Estimates are periodically reviewed in light of changes in circumstances, facts and experience. Actual results could differ from the Company's estimates.

Collaboration Agreements

The Company follows the accounting guidance for collaboration agreements, which requires that certain transactions between the Company and collaborators be recorded in its consolidated statements of operations and comprehensive loss on either a gross basis or net basis, depending on the characteristics of the collaborative relationship, and requires enhanced disclosure of collaborative relationships. The Company evaluates its collaboration agreements for proper classification in its consolidated statements of operations and comprehensive loss based on the nature of the underlying activity. If payments to and from collaborative partners are not within the scope of other authoritative accounting literature, the consolidated statements of operations classification for the payments is based on a reasonable, rational analogy to authoritative accounting literature that is applied in a consistent manner. When the Company has concluded that it has a customer relationship with one of its collaborators, such as that with Seattle Genetics (see Note 5), the Company follows the guidance in Accounting Standards Codification ("ASC") Topic 606, *Revenue From Contracts With Customers* ("ASC 606").

Revenue Recognition of Collaboration Agreements

The Company performs the following five steps to determine revenue recognition for arrangements that are within the scope of ASC 606: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the Company satisfies a performance obligation. The Company only applies the five-step model to contracts when collectability of the consideration to which the Company is entitled in exchange for the goods or services it transfers to the customer is determined to be probable.

At contract inception, once the contract is determined to be within the scope of ASC 606, the Company assesses whether the goods or services promised within each contract are distinct and, therefore, represent a separate performance obligation. Goods and services that are determined not to be distinct are combined with other promised goods and services until a distinct bundle is identified. In determining whether goods or services are distinct, management evaluates certain criteria, including whether (i) the customer can benefit from the good or service either on its own or together with other resources that are readily available to the customer (capable of being distinct) and (ii) the good or service is separately identifiable from other goods or services in the contract (distinct in the context of the contract).

At the inception of an arrangement that includes options for a customer to purchase additional services or products at agreed upon prices in the future, the Company evaluates whether each option provides a material right. An option that provides a material right will be accounted for as a separate performance obligation.

The Company then determines the transaction price, which is the amount of consideration it expects to be entitled from a customer in exchange for the promised goods or services, for each performance obligation and recognizes the associated revenue as each performance obligation is satisfied. The Company's estimate of the transaction price for each contract includes all variable consideration to which it expects to be entitled. Variable consideration includes payments in the form of collaboration payments, regulatory milestone payments, commercial milestone payments, and royalty payments. For collaboration, regulatory milestone, and commercial milestone payments the Company evaluates whether it is probable that the consideration associated with each milestone will not be subject to a significant reversal in the cumulative amount of revenue recognized. Amounts that meet this threshold are included in the transaction price using the most likely amount method, whereas amounts that do not meet this threshold are considered constrained and excluded from the transaction price until they meet this threshold. At the end of each subsequent reporting period, the Company re-evaluates the probability of a significant reversal of the cumulative revenue recognized for its milestones, and, if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis. The Company excludes sales-based royalties until the sale occurs.

ASC 606 requires the Company to allocate the arrangement consideration on a relative standalone selling price basis for each performance obligation after determining the transaction price of the contract and identifying the performance obligations to which that amount should be allocated. The relative standalone selling price is defined in the new revenue standard as the price at which an entity would sell a promised good or service separately to a customer. If other observable transactions in which the Company has sold the same performance obligation separately are not available, the Company is required to estimate the standalone selling price of each performance obligation. Key assumptions to determine the standalone selling price may include forecasted revenues, development timelines, reimbursement rates for personnel costs, discount rates and probabilities of technical and regulatory success. A performance obligation is satisfied and revenue is recognized when "control" of the promised good or service is transferred, either over time or at a point in time, to the customer. A customer obtains control of a good or service if it has the ability to (1) direct its use and (2) obtain substantially all of the remaining benefits from it.

If a contract should be accounted for as a combined performance obligation, the Company determines the period over which the performance obligations will be performed and revenue will be recognized. The Company recognizes revenue for its collaboration agreement using the cost-to-cost method, which it believes best depicts the transfer of control to the customer. Under the cost-to-cost method, the extent of progress towards completion is measured based on the ratio of actual costs incurred to the total estimated costs expected upon satisfying the identified performance obligation. Under this method, revenue is recorded as a percentage of the estimated transaction price based on the extent of progress towards completion. Significant management judgment is required in determining the level of effort required under an arrangement and the period over which the Company is expected to complete its performance obligations under an arrangement. The estimate of the Company's measure of progress and estimate of variable consideration to be included in the transaction price is updated at each reporting date as a change in estimate. The amount of transaction price allocated to the satisfied portion of the performance obligation, based on the Company's measure of progress, is recognized immediately on a cumulative catch-up basis, resulting in an adjustment to revenue in the period of change. The amount related to the unsatisfied portion is recognized as that portion is satisfied over time.

Amounts received prior to satisfying the revenue recognition criteria listed above are recorded as deferred revenue in the accompanying consolidated balance sheets. Amounts expected to be recognized as revenue within 12 months of the balance sheet date are classified as current deferred revenue. Amounts not expected to be recognized as revenue within the following 12 months of the balance sheet date are classified as deferred revenue, net of current portion. At March 31, 2019, the Company had deferred revenue of $16.9 million related to its collaboration. The Company recognized revenue of $3.1 million during the three months ended March 31 2019, from the deferred revenue balance at December 31, 2018. The Company recognizes deferred revenue by first allocating from the beginning deferred revenue balance to the extent that the beginning deferred revenue balance exceeds the revenue to be recognized. Billings during the period are added to the deferred revenue balance to be recognized in future periods. To the extent that the beginning deferred revenue balance is less than revenue to be recognized during the period, billings during the period are allocated to revenue. In the event that a collaboration agreement was to be terminated and the Company had no further performance obligations, the Company would recognize as revenue any portion of the upfront payment and other payments that had not previously been recorded as revenue and were classified as deferred revenue at the date of such termination.

Amounts are recorded as accounts receivable when the Company's right to consideration is unconditional. The Company does not assess whether a contract has a significant financing component if the expectation at contract inception is that the period between payment by the customer and the transfer of the promised goods or services to the customer will be one year or less. The Company expenses incremental costs of obtaining a contract as and when incurred if the expected amortization period of the asset that the Company would have recognized is one year or less or the amount is immaterial. At March 31, 2019 and December 31, 2018, the Company has not capitalized any costs to obtain its contract.

Recently Adopted Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)* ("ASU 2016-02"), which sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract (i.e., lessees and lessors). The new standard requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will determine whether lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease, respectively. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. Leases with a term of 12 months or less will be accounted for similar to existing guidance for operating leases today. The guidance is effective for public entities for annual reporting periods beginning after December 15, 2018 and for interim periods within those fiscal years, and early adoption is permitted. ASU 2016-02 initially required adoption using a modified retrospective approach, under which all years presented in the financial statements would be prepared under the revised guidance. In July 2018, the FASB issued ASU No. 2018-11, *Leases (Topic 842)*, which added an optional transition method under which financial statements may be prepared under the revised guidance for the year of adoption, but not for prior years. Under the latter method, entities will recognize a cumulative catch-up adjustment to the opening balance of retained earnings in the period of adoption. The Company has adopted the new leasing standard on January 1, 2019, using a modified retrospective transition approach to be applied to leases existing as of, or entered into after, January 1, 2019. The Company has applied the "package of practical expedients", which permits the Company not to reassess under the new standards for prior conclusions about lease identification, lease classification and initial direct costs. The Company has also elected to apply the practical expedient that permits lessees to make an accounting policy election (by class of underlying asset) to account for each separate lease component of a contract and its associated non-lease components as a single lease component.

Upon adoption of the new leasing standards, the Company has recognized a lease liability of $7.5 million and a related right-of-use asset of $6.7 million on its consolidated balance sheet with the difference being due to the elimination of previously reported deferred rent. The adoption of the standard did not have a material impact on the results of operations or cash flows.

In June 2018, the FASB issued ASU No. 2018-07, *Compensation – Stock Compensation (Topic 718), Improvements to Nonemployee Share-Based Payment Accounting* ("ASU 2018-07"). ASU 2018-07 is intended to simplify aspects of share-based compensation issued to non-employees by making the guidance consistent with the accounting for employee share-based compensation. ASU 2018-07 is required to be adopted for annual periods beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted. The Company early adopted ASU 2018-07 on January 1, 2018. The adoption of this guidance did not have a material impact on its consolidated financial statements.

Recently Issued Accounting Pronouncements

In August 2018, the FASB issued ASU 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement, ("ASU 2018-13"). The new standard removes certain disclosures, modifies certain disclosures and adds additional disclosures related to fair value measurement. The new standard will be effective beginning January 1, 2020 and early adoption is permitted. The Company is currently evaluating the impact that the adoption of ASU 2018-13 will have on its consolidated financial statements.

In November 2018, the FASB issued ASU No. 2018-18, *Collaborative Arrangements (Topic 808):Clarifying the Interaction between Topic 808 and Topic 606*. The main provisions of ASU 2018-18 include: (i) clarifying that certain transactions between collaborative arrangement participants should be accounted for as revenue when the collaborative arrangement participant is a customer in the context of a unit of account and (ii) precluding the presentation of transactions with collaborative arrangement participants that are not directly related to sales to third parties together with revenue. This guidance will be effective for annual reporting periods beginning after December 15, 2019, including interim periods within those annual reporting periods, and early adoption is permitted. The guidance per ASU 2018-18 is to be adopted retrospectively to the date of initial application of Topic 606. The Company is currently evaluating the impact that the adoption of ASU 2018-18 will have on its consolidated financial statements.

3. Marketable Securities and Fair Value of Financial Assets and Liabilities

Marketable securities by security type consisted of the following (in thousands):

	March 31, 2019			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury bills (due within one year)	$ 7,991	$ —	$ (2)	$7,989
	$ 7,991	$ —	$ (2)	$7,989

	December 31, 2018			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury bills and notes (due within one year)	$ 22,935	$ —	$ (12)	$22,923
	$ 22,935	$ —	$ (12)	$22,923

The following tables present information about the Company's assets that are measured at fair value on a recurring basis (in thousands):

	Fair Value Measurements at March 31, 2019 Using:			
	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market funds	$ —	$ 6,571	$ —	$ 6,571
Marketable securities:				
U.S. Treasury bills	7,989	—	—	7,989
	$ 7,989	$ 6,571	$ —	$ 14,560

	Fair Value Measurements at December 31, 2018 Using:			
	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market funds	$ —	$ 52,100	$ —	$ 52,100
Marketable securities:				
U.S. Treasury bills and notes	22,923	—	—	22,923
	$ 22,923	$ 52,100	$ —	$ 75,023

During the three months ended March 31, 2019 and 2018, there were no transfers between Level 1, Level 2 and Level 3.

4. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following (in thousands):

	March 31, 2019	December 31, 2018
Accrued employee compensation and benefits	$ 624	$ 1,599
Accrued external research and development expense	2,066	1,799
Accrued external manufacturing costs	1,988	1,015
Other	1,389	1,064
	$ 6,067	$ 5,477

5. Collaboration Agreement

The Company has a collaboration agreement with Seattle Genetics, entered into in 2015, whereby the parties agreed to jointly develop two product candidates incorporating the Company's ACTR platform and Seattle Genetics' antibodies. Under the collaboration agreement, the Company conducts preclinical research and clinical development activities related to the two specified product candidates through Phase I clinical development, and Seattle Genetics provides the funding for those activities. Under the collaboration agreement, the Company recognized revenue of $3.1 million and $2.2 million for the three months ended March 31, 2019 and 2018, respectively, related to research and clinical development activities performed. As of March 31, 2019, deferred revenue of $16.9 million was recorded related to this agreement. As of March 31, 2019, the aggregate amount of the transaction price allocated to the remaining performance obligation for preclinical research and clinical development activities related to the two specified product candidates through Phase I is estimated to be approximately $51.0 million, which is expected to be recognized as revenue through December 31, 2022.

6. Loan and Security Agreement

The Company has a loan and security agreement (the "Loan Agreement") with Pacific Western Bank ("PWB"), entered into in 2017, which provided for term loan borrowings of up to $15.0 million through January 19, 2019. Borrowings under the Loan Agreement bear interest at a variable annual rate equal to the greater of (i) the prime rate plus 0.25% or (ii) 3.75%, and were payable over an interest-only period until January 19, 2019, followed by a 24-month period of equal monthly payments of principal and interest. All amounts outstanding as of the maturity date of January 19, 2021 become immediately due and payable. In January 2019, the Company amended the Loan Agreement to extend the available date for borrowings from January 19, 2019 to June 30, 2019 and extend the interest only period from January 19, 2019 to June 30, 2020, with the possibility of further extension to March 31, 2021 if certain equity financing considerations are met. Additionally, the loan repayment period will be over a 24-month period following the end of the interest-only period.

In connection with the Loan Agreement, the Company agreed to enter into warrant agreements with PWB pursuant to which warrants will be issued to purchase a number of shares of the Company's capital stock equal to 1% of the amount of each term loan borrowing under the Loan Agreement, divided by the applicable exercise price.

No amounts have been borrowed as term loans under the Loan Agreement as of March 31, 2019. Borrowings under the Loan Agreement are collateralized by substantially all of the Company's assets, except for its intellectual property. Under the Loan Agreement, the Company has agreed to affirmative and negative covenants to which it will remain subject until maturity. These covenants include limitations on the Company's ability to incur additional indebtedness and engage in certain fundamental business transactions, such as mergers or acquisitions of other businesses. There are no financial covenants associated with the Loan Agreement. Events of default under the Loan Agreement include failure to make payments when due, insolvency events, failure to comply with covenants and material adverse effects with respect to the Company.

7. Stock-Based Compensation

2018 Stock Option and Incentive Plan

The Company's 2018 Stock Option and Incentive Plan, (the "2018 Plan"), which became effective on March 27, 2018 provides for the grant of incentive stock options, nonqualified stock options, stock appreciation rights, restricted stock units, restricted stock awards, unrestricted stock awards, cash-based awards and dividend equivalent rights. The number of shares initially reserved for issuance under the 2018 Plan is 2,800,721. Additionally, the shares of common stock that remained available for issuance under the previously outstanding 2015 Stock Incentive Plan (the "2015 Plan") became available under the 2018 Plan. The number of shares reserved for the 2018 Plan will automatically increase on each January 1 by 4% of the number of shares of the Company's common stock outstanding on the immediately preceding December 31 or a lesser number of shares determined by the Company's board of directors. The shares of common stock underlying any awards that are forfeited, canceled, held back upon exercise or settlement of an award to satisfy the exercise price or tax withholding, repurchased or are otherwise terminated by the Company under the 2018 Plan or the 2015 Plan will be added back to the shares of common stock available for issuance under the 2018 Plan. The number of authorized shares reserved for issuance under the 2018 Plan was increased by 1,202,319 shares effective as of January 1, 2019. As of March 31, 2019, 3,329,490 shares remained available for future issuance under the 2018 Plan.

2018 Employee Stock Purchase Plan

The Company's 2018 Employee Stock Purchase Plan (the "ESPP") became effective on March 28, 2018 at which time a total of 314,000 shares of common stock were reserved for issuance. In addition, the number of shares of common stock that may be issued under the ESPP will automatically increase on each January 1 through January 1, 2027, by the least of (i) 500,000 shares of common stock, (ii) 1% of the number of shares of the Company's common stock outstanding on the immediately preceding December 31 or (iii) such lesser number of shares as determined by the ESPP administrator. The number of authorized shares reserved for issuance under the ESPP was increased by 300,580 shares effective as of January 1, 2019. As of March 31, 2019, no shares have been issued under the ESPP and 614,580 shares remain available for issuance.

Stock Option Issuances

During the three months ended March 31, 2019, the Company granted service-based options to participants for the purchase of 459,046 shares of common stock with a weighted average grant-date fair value of $2.94 per share.

During the three months ended March 31, 2019, the Company granted options to certain employees for the purchase of 400,000 shares of common stock with a weighted average grant-date fair value of $2.85 per share that vest under a combination of performance-based and service-based vesting conditions if certain performance vesting criteria are achieved on or before March 31, 2020. As of March 31, 2019, the Company has not recorded stock-based compensation expense as the performance conditions have not been deemed to be probable of being achieved.

Stock-Based Compensation

The Company recorded stock-based compensation expense in the following expense categories of its consolidated statements of operations and comprehensive loss (in thousands):

	Three Months Ended March 31,	
	2019	2018
Research and development expenses	$ 599	$ 401
General and administrative expenses	127	78
Total	$ 726	$ 479

8. Commitments and Contingencies

Operating Lease

The Company leases office and laboratory space under a non-cancelable operating lease that expires in April 2023 with the Company's option to extend for an additional five-year term. The lessee has the right to terminate the lease in the event of the inability to use the space due to substantial damage while the lessor has the right to terminate the lease for tenant's default of lease financial obligations. Per the terms of the lease agreement, the Company does not have any residual value guarantees. This extension has not been considered in the determination of the lease liability as the Company is not obligated to exercise their option and it is not reasonably certain that the option will be exercised. The lease payments include fixed lease payments that escalate over the term of the lease on an annual basis. The Company's real estate lease in Cambridge is a net lease, as the non-lease components (i.e. common area maintenance) are paid separately from rent based on actual costs incurred. Therefore, the non-lease component and related payments are not included in the right-of-use asset and liability and are reflected as an expense in the period incurred. The discount rate used in determining the lease liability represents the Company's incremental borrowing rate as the rate implicit in the lease could not be readily determined.

The elements of the lease expense were as follows (in thousands):

	Three Months Ended March 31, 2019
Lease cost	
Operating lease cost	$ 443
Variable lease cost (1)	305
Total lease cost	$ 748
Other information	
Operating cash flows used for operating leases	$ 766
Remaining lease term	4.08
Discount rate	6.25%

(1) The variable lease costs for the quarter ended March 31, 2019 include common area maintenance and other operating charges.

The following table summarizes the future minimum payments due under the operating lease as of March 31, 2019 (in thousands):

Year Ending December 31,	
2019	$1,418
2020	1,933
2021	1,989
2022	2,046
2023	689
Total future minimum lease payments	8,075
Less: imputed interest	923
Total operating lease liability	$7,152
Included in the consolidated balance sheet:	
Current operating lease liability	$1,507
Operating lease liability, net of current portion	5,645
Total operating lease liability	$7,152

As previously disclosed in our 2018 Annual Report on Form 10-K, future minimum lease payments under the operating lease as of December 31, 2018 were as follows (in thousands):

Year Ending December 31,	
2019	$1,878
2020	1,933
2021	1,989
2022	2,046
2023	689
	$8,535

Under the terms of the lease, the Company secured a $1.3 million letter of credit as security for its leased facility. The underlying cash securing this letter of credit has been classified as non-current restricted cash in the accompanying consolidated balance sheets. This is a refundable deposit and not a lease payment. This has been excluded from the undiscounted cash flows above.

License Agreement

Under its license agreement with National University of Singapore and St. Jude Children's Research Hospital, Inc. (collectively the "Licensors") entered into in 2014, the Company is obligated to pay license maintenance fees on each anniversary of the effective date of the agreement that escalate from less than $0.1 million for each of the first seven years to $0.1 million on the eighth anniversary and each year thereafter. The Company is also obligated to make aggregate milestone payments of up to 5.5 million Singapore dollars (equivalent to approximately $4.0 million as of March 31, 2019) upon the achievement of specified clinical and regulatory milestones and to pay tiered royalties ranging in the low single-digit percentages on annual net sales of licensed products sold by the Company or its sublicensees. The royalties are payable on a product-by-product and country-by-country basis and may be reduced in specified circumstances. Additionally, under certain circumstances, the Company is obligated to pay the Licensors a percentage of amounts received from sublicensees.

The license agreement will expire on a country-by-country basis until the last to expire of the patents and patent applications covering such licensed product or service. The Licensors may terminate the license agreement within 60 days after written notice in the event of a breach of contract. The Licensors may also terminate the agreement upon written notice in the event of the Company's bankruptcy, liquidation, or insolvency. In addition, the Company has the right to terminate this agreement in its entirety at will upon 90 days' advance written notice to the Licensors. However, if the Company has commenced the commercialization of licensed products, the Company can only terminate at will if it ceases all development and commercialization of licensed products.

Manufacturing Commitment

As of March 31, 2019, the Company had non-cancelable minimum purchase commitments under contract manufacturing agreements for payments totaling $3.6 million over the following 12 months.

Indemnification Agreements

In the ordinary course of business, the Company may provide indemnification of varying scope and terms to vendors, lessors, business partners and other parties with respect to certain matters including, but not limited to, losses arising out of breach of such agreements or from intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with members of its board of directors and its executive officers that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnifications. The Company does not believe that the outcome of any claims under indemnification arrangements will have a material effect on its financial position, results of operations or cash flows, and it has not accrued any liabilities related to such obligations in its consolidated financial statements as of March 31, 2019 or December 31, 2018.

Legal Proceedings

The Company is not currently party to any material legal proceedings. At each reporting date, the Company evaluates whether or not a potential loss amount or a potential range of loss is probable and reasonably estimable under the provisions of the authoritative guidance that addresses accounting for contingencies. The Company expenses as incurred the costs related to such legal proceedings.

9. Net Loss Per Share

Basic and diluted net loss per share attributable to common stockholders was calculated as follows (in thousands, except share and per share amounts):

	Three Months Ended March 31,	
	2019	2018
Numerator:		
Net loss	$ (11,691)	$ (6,735)
Accretion of redeemable convertible preferred stock to redemption value	—	(16)
Net loss attributable to common stockholders	$ (11,691)	$ (6,751)
Denominator:		
Weighted average common shares outstanding, basic and diluted	30,083,006	10,204,591
Net loss per share attributable to common stockholders, basic and diluted	$ (0.39)	$ (0.66)

The Company's potential dilutive securities have been excluded from the computation of diluted net loss per share as the effect would be to reduce the net loss per share. The Company excluded the following potential common shares, presented based on amounts outstanding at each period end, from the computation of diluted net loss per share attributable to common stockholders for the periods indicated above because including them would have had an anti-dilutive effect:

	March 31,	
	2019	2018
Redeemable convertible preferred shares (as converted to common stock)	—	13,229,362
Stock options to purchase common stock	4,267,697	3,873,879
	4,267,697	17,103,241

10. Retirement Plan

The Company has a defined-contribution plan under Section 401(k) of the Internal Revenue Code (the "401(k) Plan"). The 401(k) Plan covers all employees who meet defined minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pre-tax basis. As currently established, the Company is not required to make and to date has not made any contributions to the 401(k) Plan. The Company did not make any matching contributions during the three months ended March 31, 2019 or 2018.

11. Subsequent Events

In April 2019, the Company filed a shelf registration statement on Form S-3 with the SEC. The shelf registration statement allows the Company to sell from time-to-time up to $150 million of common stock, preferred stock, debt securities, warrants, or units comprised of any combination of these securities, for its own account in one or more offerings. The terms of any offering under the shelf registration statement will be established at the time of such offering and will be described in a prospectus supplement filed with the SEC prior to the completion of any such offering.

Additionally, on April 1, 2019 and pursuant to the Form S-3, the Company entered into a Sales Agreement (the "Sales Agreement") with Cowen and Company, LLC ("Cowen"), pursuant to which the Company may issue and sell, from time to time, shares of its common stock having an aggregate offering price of up to $50.0 million through Cowen as the sales agent. Cowen may sell the Company's common stock by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415(a)(4) of the Securities Act, including sales made directly on or through the Nasdaq Global Select Market or any other existing trade market for the Company's common stock, in negotiated transactions at market prices prevailing at the time of sale or at prices related to prevailing market prices, or any other method permitted by law. The shares of the Company's common stock to be sold under the Sales Agreement will be sold and issued pursuant to the Form S-3 and the related prospectus and one or more prospectus supplements. The Company will pay Cowen 3.0% of the aggregate gross proceeds from each sale of shares under the Sales Agreement.

Item 2. 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 in conjunction with our financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K. Some of the information contained in this discussion and analysis or set forth elsewhere in this Quarterly Report on Form 10-Q, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of certain factors, including but not limited to those set forth under the caption "Risk Factors" in the Annual Report on Form 10-K for the year ended December 31, 2018.

Overview

We are a clinical-stage biopharmaceutical company focused on the development and commercialization of novel immunotherapy products designed to harness the power of a patient's immune system to cure cancer. Our proprietary technologies include a universal, engineered cell therapy, referred to as Antibody-Coupled T cell Receptor (ACTR), that is intended to be used in combination with a wide range of tumor-specific antibodies to target different tumor types. In addition, we have developed a second novel technology, Bolt-On Chimeric Receptor (BOXR), for improving T cell functionality in solid tumor cancer applications by overcoming immunosuppressive tumor microenvironments. BOXR T cells may be directed to attack tumor cells using a variety of targeting strategies and our efforts to date have demonstrated activity using either ACTR or scFv-based CAR receptors. Our vision is to use our ACTR and BOXR product candidates to transform cancer treatment and deliver patient cures in many different hematologic and solid tumor cancers, improving upon current therapies.

We have a broad product pipeline that includes five programs. Four clinical-stage programs are based on the ACTR platform, composed of either ACTR087 or ACTR707 T cells co-administered with approved and investigational antibodies. ACTR087 is our original ACTR construct, comprising the ectodomain of CD16, the costimulatory domain of 4-1BB, and the signaling domain of CD3-zeta. ACTR707 is a modified ACTR construct selected for improved performance across a number of dimensions, including increased proliferation, cytokine secretion, and persistence in a repeat stimulation test. ACTR707 differs from ACTR087 in terms of its costimulatory domain (CD28) and other structural components. Our most advanced programs are comprised of ACTR087 or ACTR707 used in combination with rituximab to treat adult patients with relapsed or refractory CD20+ non-Hodgkin lymphoma (r/r NHL). These combinations are being tested in two ongoing, multi-center, open-label Phase I clinical trials called ATTCK-20-2 and ATTCK-20-03.

We completed patient enrollment and dosing of ACTR707 in combination with rituximab in the first two dose levels of the ATTCK-20-03 trial and presented preliminary data from these dose levels at the Sixtieth annual American Society of Hematology (ASH) meeting in December 2018 (2018 ASH Meeting). We have subsequently completed enrollment of patients in the third dose level of this trial and initiated enrollment at the fourth dose level. In 2019, we expect to define a recommended phase II dose (RP2D) based upon analysis of the cohorts tested during the dose escalation phase of the trial and initiate a cohort expansion at the preliminary RP2D in the second half of 2019.

In the fourth quarter of 2017, we completed patient enrollment and dosing of ACTR087 in combination with rituximab in the dose escalation phase of the ATTCK-20-2 trial, and in the second quarter of 2018 we initiated the cohort expansion phase of the trial using an optimized dose of ACTR087. We completed enrollment in the cohort expansion phase of the ATTCK-20-2 study in the first quarter of 2019. Preliminary data from the dose escalation phase of the ATTCK-20-2 trial were presented in December 2017 at the Fifty-ninth annual ASH meeting (2017 ASH Meeting). In both Phase I trials, we believe that we have demonstrated clinical proof of concept, as evidenced by ACTR T cell expansion and persistence, a favorable tolerability profile at defined dose levels, and anti-tumor activity. Based on emerging clinical data from the Phase I ATTCK-20-03 trial, the continuing progress in that trial, and our desire to efficiently manage resources, we have selected ACTR707 used in combination with rituximab to be the lead lymphoma program for advancement to further clinical development. We plan to report data on all enrolled patients in the ATTCK-20-2 trial at the end of 2019.

Our third program, ACTR087 used in combination with SEA-BCMA, is the first program resulting from our strategic collaboration with Seattle Genetics, Inc. (Seattle Genetics). We are currently enrolling and dosing adult patients with r/r multiple myeloma in a Phase I multi-center trial, ATTCK-17-01. We reported initial data from the first three cohorts of this trial at the 2018 ASH Meeting. We are currently enrolling and dosing patients in the fourth cohort and expect to continue dose escalation during 2019 and to report data from multiple dose cohorts in the second half of 2019.

Our fourth program is ACTR707 used in combination with trastuzumab. We have an active IND to evaluate ACTR707 used in combination with trastuzumab as a potential treatment for advanced HER2+ solid tumor cancers, and in December 2018 we initiated a Phase I multi-center trial called ATTCK-34-01 testing this regimen in patients with HER2+ solid tumor cancers. We plan to enroll patients into this dose escalation trial throughout 2019 and to report initial clinical data from the ongoing dose escalation trial at the end of 2019.

Our fifth program is derived from our BOXR platform and is designated BOXR1030. BOXR1030 is comprised of a GPC3 CAR T cell therapy that includes an undisclosed bolt-on transgene expected to improve T cell metabolism and, preserve functionality in the environment of highly glycolytic tumors. We have initiated formal preclinical development activities, including safety testing and GMP process development, to prepare for future clinical testing and plan to present additional information regarding BOXR1030 in the second half of 2019.

In the longer term, we aim to leverage our ACTR and BOXR platforms to develop a broad range of programs to address many different hematologic and solid tumor cancers.

Since our inception in 2014, we have focused significant efforts and financial resources on building our ACTR and BOXR platforms, establishing and protecting our intellectual property portfolio, conducting research and development of our product candidates, manufacturing drug product material for use in preclinical studies and clinical trials, staffing our company, and raising capital. We do not have any products approved for sale and have not generated any revenue from product sales. To date, we have funded our operations primarily with proceeds from the sales of preferred stock, our initial public offering of common stock and concurrent private placement (as further discussed below), and payments received under our collaboration agreement with Seattle Genetics. On April 3, 2018, we completed our initial public offering (IPO) of our common stock and issued and sold 5,770,000 shares of our common stock at a public offering price of $12.00 per share, resulting in net proceeds of approximately $61.5 million, after deducting underwriting discounts and commissions and other offering costs. In addition, we completed a concurrent private placement of $5.0 million of shares of common stock at the public offering price of $12.00 per share, or 416,666 shares, with Seattle Genetics (Concurrent Private Placement).

In connection with our IPO, we issued and sold an additional 215,000 shares of our common stock on April 25, 2018, pursuant to the underwriters' partial exercise of their option to purchase additional shares of common stock at the public offering price of $12.00 and received additional net proceeds of $2.4 million, after deducting underwriting discounts and commissions.

Since our inception, we have incurred significant operating losses. Our ability to generate product revenue sufficient to achieve profitability will depend heavily on the successful development and eventual commercialization of one or more of our product candidates. Our net losses were $11.7 million for the three months ended March 31, 2019. As of March 31, 2019, we had an accumulated deficit of $103.8 million. We expect to continue to incur significant expenses and increasing operating losses for at least the next several years. We expect that our expenses and capital requirements will increase substantially in connection with our ongoing activities, particularly if and as we:

- continue additional clinical trials for our product candidates;
- continue to discover and develop additional product candidates;
- acquire or in-license other product candidates and technologies;
- maintain, expand, and protect our intellectual property portfolio;
- hire additional clinical, scientific, and commercial personnel;
- establish manufacturing capabilities in-house;
- establish a commercial manufacturing source and secure supply chain capacity sufficient to provide commercial quantities of any product candidates for which we may obtain regulatory approval;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- establish a sales, marketing, and distribution infrastructure to commercialize any products for which we may obtain regulatory approval; and
- add operational, financial, and management information systems and personnel, including personnel to support our product development and planned future commercialization efforts, as well as to support our transition to a public reporting company.

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

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

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

As of March 31, 2019, we had cash, cash equivalents, and marketable securities of $67.1 million and available borrowings under our loan and security agreement of $15.0 million. We expect that our cash, cash equivalents and marketable securities will be sufficient to fund our operating expenses and capital expenditure requirements into early 2021, without considering available borrowings under our loan and security agreement. See "—Liquidity and Capital Resources".

Components of Our Results of Operations

Revenue

To date, we have not generated any revenue from product sales and do not expect to generate any revenue from the sale of products in the near future. If our development efforts for our product candidates are successful and result in regulatory approval or additional license or collaboration agreements with third parties, we may generate revenue in the future from a combination of product sales or payments from additional collaboration or license agreements that we may enter into with third parties. We expect that our revenue for the next several years will be derived primarily from a collaboration we entered into with Seattle Genetics in June 2015 as well as any additional collaborations that we may enter into in the future. We cannot provide assurance as to the timing of future milestone or royalty payments or that we will receive any of these payments at all.

The Company has a collaboration agreement with Seattle Genetics whereby the parties agreed to jointly develop two product candidates incorporating our ACTR platform and Seattle Genetics' antibodies. Under the collaboration agreement, the Company conducts preclinical research and clinical development activities related to the two specified product candidates through Phase I clinical development, and Seattle Genetics provides the funding for those activities.

Under the collaboration agreement with Seattle Genetics, we recognized revenue of $3.1 million and $2.2 million for the three months ended March 31, 2019 and 2018, respectively, related to the upfront payment received from Seattle Genetics under our collaboration agreement as well as reimbursements of research and development costs.

Operating Expenses

Research and Development Expenses

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

- employee-related expenses, including salaries, related benefits, and stock-based compensation expense for employees engaged in research and development functions;
- expenses incurred in connection with the preclinical and clinical development of our product candidates, including under agreements with third parties, such as consultants and contractors and contract research organizations (CROs);
- the cost of manufacturing drug products for use in our preclinical studies and clinical trials, including under agreements with third parties, such as consultants and contractors and contract manufacturing organizations (CMOs);
- laboratory supplies and animal care;
- facilities, depreciation, and other expenses, which include direct and allocated expenses for rent and maintenance of facilities and insurance; and
- payments made under third-party licensing agreements.

Our research and development costs include costs for the development of product candidates that we are jointly developing with Seattle Genetics and for which we receive reimbursement as specified in the agreement. We expense research and development costs as incurred. Advance payments that we make for goods or services to be received in the future for use in research and development activities are recorded as prepaid expenses. The prepaid amounts are expensed as the related goods are delivered or the services are performed.

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

Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect that our research and development expenses will increase substantially in connection with our planned clinical and preclinical development activities in the near term and in the future. At this time, we cannot reasonably estimate or know the nature, timing, and costs of the efforts that will be necessary to complete the preclinical and clinical development of any of our product candidates. The successful development and commercialization of our product candidates is highly uncertain. This is due to the numerous risks and uncertainties associated with product development and commercialization, including the following:

- the timing and progress of preclinical and clinical development activities;
- the number and scope of preclinical and clinical programs we decide to pursue;
- the progress of the development efforts of parties with whom we have entered, or may enter, into collaboration arrangements;
- our ability to maintain our current research and development programs and to establish new ones;
- our ability to establish new licensing or collaboration arrangements;
- the successful completion of clinical trials with safety, tolerability, and efficacy profiles that are satisfactory to the U.S. Food and Drug Administration (FDA) or any comparable foreign regulatory authority;
- the receipt of regulatory approvals from applicable regulatory authorities;
- the success in establishing and operating a manufacturing facility, or securing manufacturing supply through relationships with third parties;
- our ability to obtain and maintain patents, trade secret protection, and regulatory exclusivity, both in the United States and internationally;
- our ability to protect our rights in our intellectual property portfolio;
- the commercialization of our product candidates, if and when approved;
- the acceptance of our product candidates, if approved, by patients, the medical community, and third-party payors;
- competition with other products; and
- a continued acceptable safety profile of our therapies following approval.

A change in the outcome of any of these variables with respect to the development of any of our product candidates could significantly change the costs and timing associated with the development of that product candidate. We may never succeed in obtaining regulatory approval for any of our product candidates.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related costs, including stock-based compensation, for personnel in executive, finance, and administrative functions. General and administrative expenses also include direct and allocated facility-related costs as well as professional fees for legal, patent, consulting, investor and public relations, accounting, and audit services. We anticipate that our general and administrative expenses will increase in the future as we increase our headcount to support our continued research activities and development of our product candidates. We also anticipate that we will incur increased accounting, audit, legal, regulatory, compliance, and director and officer insurance costs as well as investor and public relations expenses associated with operating as a public company.

Other Income (Expense)

Interest Income

Interest income consists of interest earned on our cash equivalents and marketable securities balances. Our interest income has not been significant due to low interest earned on invested balances.

Other Income, Net

Other income, net consists of miscellaneous income and expense unrelated to our core operations, primarily income from subleasing a portion of our headquarters facilities.

Income Taxes

Since our inception, we have not recorded any current or deferred tax benefit for the net losses we have incurred in each year or for our earned research and development tax credits, as we believe, based upon the weight of available evidence, that it is more likely than not that all of our net operating loss carryforwards and tax credits will not be realized. As of December 31, 2018, we had U.S. federal and state net operating loss carryforwards of $69.8 million and $71.7 million, respectively, which may be available to offset future income tax liabilities and begin to expire in 2035. The 2018 federal net operating loss of $39.6 million is available to be carried forward indefinitely but can only offset 80% of taxable income per year. As of December 31, 2018, we also had U.S. federal and state research and development tax credit carryforwards of $4.0 million and $0.9 million, respectively, which may be available to offset future income tax liabilities and begin to expire in 2034 and 2030, respectively. As of December 31, 2018, we had Massachusetts investment tax credits of $0.2 million which generally have a 3-year carryover period.

We have recorded a full valuation allowance against our net deferred tax assets at each balance sheet date.

Results of Operations

Comparison of the Three Months Ended March 31, 2019 and 2018

The following table summarizes our results of operations for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,		
	2019	2018	Change
	(in thousands)		
Collaboration revenue	$ 3,053	$ 2,220	$ 833
Operating expenses:			
Research and development	12,403	8,142	4,261
General and administrative	2,491	1,064	1,427
Total operating expenses	14,894	9,206	5,688
Loss from operations	(11,841)	(6,986)	(4,855)
Other income (expense):			
Interest income	150	81	69
Other income, net	—	170	(170)
Total other income, net	150	251	(101)
Net loss	$(11,691)	$(6,735)	$(4,956)

Collaboration Revenue

Collaboration revenue recognized during the three months ended March 31, 2019 and 2018 of $3.1 million and $2.2 million, respectively, was due to the recognition of revenue from payments received from Seattle Genetics under our collaboration agreement. We recognize revenue from the upfront payment we received as well as ongoing reimbursements of research and development costs from Seattle Genetics by applying the costs-to-cost method over the performance period. The increase in collaboration revenue in the first three months of 2019 as compared to the first three months of 2018 was due primarily to increased efforts to advance our programs.

Research and Development Expenses

	Three Months Ended March 31,		
	2019	2018	Change
	(in thousands)		
Direct research and development expenses by program:			
ACTR087 used in combination with rituximab	$ 1,787	$ 913	$ 874
ACTR707 used in combination with rituximab	1,317	1,142	175
ACTR087 used in combination with SEA-BCMA	1,510	626	884
ACTR707 used in combination with trastuzumab	245	—	245
Unallocated expenses:			
Personnel related (including stock-based compensation)	3,778	2,715	1,063
Laboratory supplies, facility related and other	3,766	2,746	1,020
Total research and development expenses	$ 12,403	$ 8,142	$4,261

Research and development expenses were $12.4 million for the three months ended March 31, 2019, compared to $8.1 million for the three months ended March 31, 2018. The increase in direct external costs related to our ACTR087 used in combination with rituximab program of $0.9 million was primarily due to an increase in manufacturing costs as there was higher patient enrollment in the first quarter of 2019 as compared to the first quarter of 2018. The increase in direct external costs incurred for our ACTR087 used in combination with SEA-BCMA program of $0.9 million primarily related to increased clinical trial and manufacturing costs related to our Phase I clinical trial which commenced in the first quarter of 2018. We are developing our ACTR087 used in combination with SEA-BCMA product candidate in conjunction with Seattle Genetics. We also incurred costs related to our ACTR707 used in combination with trastuzumab program, which we initiated in the fourth quarter of 2018.

The increase in personnel-related costs of $1.1 million included in unallocated expenses was primarily a result of an increase in overall compensation and an increase in stock-based compensation expense due primarily to increased headcount. Personnel-related costs for the three months ended March 31, 2019 and 2018 included stock-based compensation expense of $0.6 million and $0.4 million, respectively. The increase in laboratory supplies, facility-related, and other costs of $1.0 million was primarily due to increased facilities costs related to scaling our manufacturing processes.

General and Administrative Expenses

General and administrative expenses for the three months ended March 31, 2019 were $2.5 million, compared to $1.1 million for the three months ended March 31, 2018. The increase in general and administrative expenses was primarily due to increased professional and consulting fees of $0.8 million and increases in personnel-related costs and facility related and other costs of $0.3 million each. The increase in professional and consulting fees was primarily due to an increase in various advisory fees, including those related to audit, accounting, legal and investor relations, associated with operating as a public company. The increase in personnel-related costs was primarily due to increased headcount. The increase in facility related and other costs was primarily due to increased insurance expense associated with operating as a public company.

Interest Income

Interest income for the three months ended March 31, 2019 and 2018 was $0.2 million and $0.1 million, respectively. Interest income increased primarily as a result of higher invested balances due to cash proceeds received from our IPO and concurrent private placement.

Other Income, Net

Other income, net for the three months ended March 31, 2018 was $0.2 million primarily due to sublease income.

Liquidity and Capital Resources

Since our inception, we have incurred significant operating losses. We have generated limited revenue to date from funding arrangements with our collaboration partner. We have not yet commercialized any of our product candidates and we do not expect to generate revenue from sales of any product candidates for several years, if at all. Prior to our IPO, we had funded our operations with proceeds from the sales of preferred stock and payments received under our collaboration agreement.

On April 3, 2018, we completed our IPO, and issued and sold 5,770,000 shares of common stock at a public offering price of $12.00 per share, resulting in net proceeds of $61.5 million after deducting underwriting discounts and commissions and other offering costs. We also completed the Concurrent Private Placement and sold 416,666 shares of common stock at a public offering price of $12.00 per share, resulting in proceeds of $5.0 million. On April 25, 2018, we issued and sold an additional 215,000 shares of our common stock at the IPO price of $12.00 per share pursuant to the underwriters' partial exercise of their option to purchase additional shares of common stock, resulting in additional net proceeds of $2.4 million after deducting underwriting discounts and commissions.

As of March 31, 2019, we had cash, cash equivalents, and marketable securities of $67.1 million and available borrowings under our loan and security agreement of $15.0 million.

Cash Flows

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

	Three Months Ended March 31,	
	2019	2018
	(in thousands)	
Cash used in operating activities	$(11,518)	$(7,981)
Cash provided by investing activities	14,950	5,925
Cash provided by (used in) financing activities	11	(535)
Net increase (decrease) in cash, cash equivalents and restricted cash	$ 3,443	$(2,591)

Operating Activities

During the three months ended March 31, 2019, operating activities used $11.5 million of cash, primarily resulting from our net loss of $11.7 million and from net cash used by changes in our operating assets and liabilities of $0.8 million, partially offset by net non-cash charges of $1.0 million. Net cash used by changes in our operating assets and liabilities for the three months ended March 31, 2019 consisted primarily of a $1.0 million decrease in deferred revenue, a $0.4 million increase in accounts receivable and a $0.4 million increase in other assets, all partially offset by a $1.0 million increase in accounts payable and accrued expenses and other current liabilities.

During the three months ended March 31, 2018, operating activities used $8.0 million of cash, primarily resulting from our net loss of $6.7 million and from net cash used by changes in our operating assets and liabilities of $2.0 million, partially offset by net non-cash charges of $0.8 million. Net cash used by changes in our operating assets and liabilities for the three months ended March 31, 2018 consisted primarily of a $0.8 million increase in accounts receivable, a $0.7 million increase in prepaid expenses and other current assets, a $0.6 million decrease in deferred revenue and a $0.4 million increase in other assets, partially offset by a $0.4 million increase in accounts payable and accrued expenses and other current liabilities.

In June 2015, we received an upfront payment of $25.0 million from Seattle Genetics under our collaboration agreement. At that time, we recorded the $25.0 million as deferred revenue, to be subsequently recognized as revenue over our period of performance. Changes in deferred revenue in all periods were due to the initial recording of and increases to the amount of deferred revenue from payments from Seattle Genetics for reimbursements of research and development costs as well as the subsequent recognition as revenue of a portion of the deferred revenue.

Changes in accounts payable, accrued expenses, and prepaid expenses and other current assets and other assets in all periods were generally due to growth in our business, the advancement of our product candidates, and the timing of vendor invoicing and payments.

Investing Activities

During the three months ended March 31, 2019 and 2018, net cash provided by investing activities of $15.0 million and $6.0 million, respectively, primarily consisted of maturities and sales of marketable securities.

Financing Activities

During the three months ended March 31, 2019, net cash provided by financing activities was less than $0.1 million from the proceeds from the issuance of common stock upon stock option exercises. During the three months ended March 31, 2018, net cash used by financing activities was $0.5 million, consisting of the payment of offering costs related to the 2018 equity financing of $0.6 million, partially offset by proceeds from the issuance of common stock upon stock option exercises of less than $0.1 million.

Loan and Security Agreement

In January 2017, we entered into a loan and security agreement (the Loan Agreement) with Pacific West Bank (PWB), which provides for term loan borrowings of up to $15.0 million through January 19, 2019. Borrowings under the Loan Agreement bear interest at a variable annual rate equal to the greater of (i) the prime rate plus 0.25% or (ii) 3.75%, and are payable over an interest-only period until January 19, 2019, followed by a 24-month period of equal monthly payments of principal and interest. All amounts outstanding as of the maturity date of January 19, 2021 become immediately due and payable.

In connection with the Loan Agreement, we agreed to enter into warrant agreements with PWB pursuant to which warrants will be issued to purchase a number of shares of our capital stock equal to 1% of the amount of each term loan borrowing under the Loan Agreement, divided by the applicable exercise price.

In January 2019, we amended the Loan Agreement to extend the available date for borrowings from January 19, 2019 to June 30, 2019 and extend the interest only period from January 19, 2019 to June 30, 2020, with the possibility of further extension to March 31, 2021 if certain equity financing considerations are met. Additionally, the loan repayment period will be over a 24-month period following the end of the interest-only period. No amounts had been borrowed as term loans under the Loan Agreement as of March 31, 2019.

Borrowings under the Loan Agreement are collateralized by substantially all of our assets, except for our intellectual property. Under the Loan Agreement, we have agreed to affirmative and negative covenants to which we will remain subject until maturity. These covenants include limitations on our ability to incur additional indebtedness and engage in certain fundamental business transactions, such as mergers or acquisitions of other businesses. There are no financial covenants associated with the Loan Agreement. Events of default under the Loan Agreement include failure to make payments when due, insolvency events, failure to comply with covenants, and material adverse effects with respect to us.

Funding Requirements

We expect our expenses to increase substantially in connection with our ongoing activities, particularly as we advance the preclinical activities and clinical trials for our product candidates in development. In addition, as a result of the IPO, we are incurring additional costs associated with operating as a public company. The timing and amount of our operating expenditures will depend largely on:

- the commencement, enrollment, or results of the planned clinical trials of our product candidates or any future clinical trials we may conduct, or changes in the development status of our product candidates;
- any delay in our regulatory filings for our product candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings, including without limitation the FDA's issuance of a "refusal to file" letter or a request for additional information;
- adverse results or delays in clinical trials;
- our decision to initiate a clinical trial, not to initiate a clinical trial, or to terminate an existing clinical trial;
- adverse regulatory decisions, including failure to receive regulatory approval of our product candidates;
- changes in laws or regulations applicable to our products, including but not limited to clinical trial requirements for approvals;
- adverse developments concerning our manufacturers;
- our inability to obtain adequate product supply for any approved product or inability to do so at acceptable prices;
- our inability to establish collaborations if needed;
- our failure to commercialize our product candidates;
- additions or departures of key scientific or management personnel; and
- unanticipated serious safety concerns related to the use of our product candidates.

As of March 31, 2019, we had cash, cash equivalents, and marketable securities of $67.1 million and available borrowings under our Loan Agreement of $15.0 million. We expect that our cash, cash equivalents and marketable securities will be sufficient to fund our operating expenses and capital expenditure requirements into early 2021, without considering available borrowings under our Loan Agreement. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we expect.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our operations through a combination of equity offerings, debt financings, collaborations, strategic alliances, and marketing, distribution, or 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 and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making acquisitions or capital expenditures, or declaring dividends. If we raise additional funds through collaborations, strategic alliances, or marketing, distribution, 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 grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings or other arrangements when needed, we may be required to delay, limit, reduce, or terminate our research, 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.

Critical Accounting Policies and Significant Judgments and Estimates

Our consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States. The preparation of our consolidated financial statements and related disclosures requires us to make estimates, assumptions and judgments that affect the reported amount of assets, liabilities, revenue, costs and expenses, and related disclosures. We believe that of our critical accounting policies described under the heading “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Significant Judgments and Estimates” in our Annual Report on Form 10-K, the following involve the most judgment and complexity:

- revenue recognition of collaboration agreements;
- accrued research and development expenses; and
- stock-based compensation.

Accordingly, we believe the policies set forth above are critical to fully understanding and evaluating our financial condition and results of operations. If actual results or events differ materially from the estimates, judgments and assumptions used by us in applying these policies, our reported financial condition and results of operations could be materially affected.

Off-Balance Sheet Arrangements

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

Recently Issued Accounting Pronouncements

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

Emerging Growth Company Status

The Jumpstart Our Business Startups Act of 2012 (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 until those standards would otherwise apply to private companies. We have irrevocably elected to “opt out” of this provision and, as a result, we will comply with new or revised accounting standards when they are required to be adopted by public companies that are not emerging growth companies.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

We are a smaller reporting company, as defined in Rule 12b-2 of the Securities Exchange Act of 1934, as amended, for this reporting period and are not required to provide the information required under this item.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our President and Chief Executive Officer and our Vice President, Finance (our principal executive officer and principal financial and accounting officer, respectively), evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2019. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of March 31, 2019, our President and Chief Executive Officer and our Vice President, Finance concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

No change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) occurred during the three months ended March 31, 2019 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

We are not currently subject to any material legal proceedings.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. For a detailed discussion of the risks that affect our business, please refer to the section titled “Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018. There have been no material changes to our risk factors as previously disclosed in our Annual Report on Form 10-K.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

Our initial public offering of common stock, or the IPO, was effected through a Registration Statement on Form S-1 (File No. 333-223414) that was declared effective by the Securities and Exchange Commission, or SEC, on March 28, 2018. The net offering proceeds to us, after deducting underwriting discounts and offering expenses, were approximately $63.9 million. We received proceeds of $5.0 million from our concurrent private placement of 416,666 shares of common stock with Seattle Genetics. None of the net proceeds were paid directly or indirectly to any of our directors or officers (or their associates) or persons owning 10.0% or more of any class of our equity securities or to any other affiliates, other than payments in the ordinary course of business to officers for salaries and to non-employee directors as compensation for board or board committee service. As of March 31, 2019, we estimate that we have used approximately $34.2 million of the net proceeds from our IPO and concurrent private placement for clinical development of our product candidates and research activities and for working capital and other general corporate purposes. We have invested the unused net proceeds from the offering in marketable securities and money market accounts. Our planned use of the net proceeds from the IPO and concurrent private placement as described in our final prospectus filed pursuant to Rule 424(b)(4) under the Securities Act with the SEC on March 29, 2018 have been modified as a result of our decision to conclude enrollment in the ATTCK-20-2 study in the first half of 2019. We currently anticipate that the net proceeds will fund operating expenses and capital expenditures requirements into early 2021.

Item 6. Exhibits.

Exhibit Number	Description
10.1	Second Amendment to Loan and Security Agreement by and between Pacific Western Bank and Registrant dated as of January 18, 2019 (incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K (File No. 001-38443) filed January 23, 2019)
31.1*	Certification of Principal Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1†	Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2†	Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Label Linkbase Document.
101.PRE	XBRL Taxonomy Presentation Linkbase Document.

* Filed herewith

† This certification will not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 as amended (the "Exchange Act"), or otherwise subject to the liability of that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent specifically incorporated by reference into such filing.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

UNUM THERAPEUTICS INC.

Date: May 13, 2019

By: /s/ Charles Wilson
Charles Wilson, Ph.D.
President and Chief Executive Officer
(Principal Executive Officer)

Date: May 13, 2019

By: /s/ John Green
John Green
Vice President, Finance
(Principal Financial and Accounting Officer)

Exhibit 31.1

CERTIFICATION PURSUANT TO RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Charles Wilson, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Unum Therapeutics Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)):

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) (Paragraph omitted pursuant to SEC Release Nos. 33-8238/34-47986 and 33-8392/34-49313);

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 13, 2019

By: /s/ Charles Wilson
Charles Wilson, Ph.D.
Chief Executive Officer and President
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John Green, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Unum Therapeutics Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)):

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) (Paragraph omitted pursuant to SEC Release Nos. 33-8238/34-47986 and 33-8392/34-49313);

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 13, 2019

By: /s/ John Green
John Green
Vice President, Finance
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,

AS ADOPTED PURSUANT TO

SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Unum Therapeutics Inc. (the "Company") for the period ended March 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Charles Wilson, Ph.D., President and Chief Executive Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of his knowledge:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 13, 2019

By: /s/ Charles Wilson
Charles Wilson, Ph.D.
Chief Executive Officer and President
(Principal Executive Officer)

Exhibit 32.2

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,

AS ADOPTED PURSUANT TO

SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Unum Therapeutics Inc. (the "Company") for the period ended March 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, John Green, Vice President, Finance and Principal Financial Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of her knowledge:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 13, 2019

By: /s/ John Green
John Green
Vice President, Finance
(Principal Financial Officer)