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 June 30, 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 August 9, 2019, the registrant had 30,660,554 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.
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PART I—FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited)

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

	June 30, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 55,863	$ 55,671
Marketable securities	—	22,923
Accounts receivable	1,492	1,668
Prepaid expenses and other current assets	1,243	740
Total current assets	58,598	81,002
Operating lease, right-of-use asset	5,977	—
Property and equipment, net	2,632	3,251
Restricted cash	1,255	1,255
Other assets	846	419
Total assets	$ 69,308	$ 85,927
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 1,660	$ 1,519
Accrued expenses and other current liabilities	5,929	5,477
Operating lease liability	1,543	—
Deferred revenue	15,175	17,949
Total current liabilities	24,307	24,945
Deferred rent	—	748
Operating lease liability, net of current portion	5,243	—
Total liabilities	29,550	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; 30,660,554 shares and 30,057,970 shares issued and outstanding at June 30, 2019 and December 31, 2018, respectively	30	30
Additional paid-in capital	153,994	152,275
Accumulated other comprehensive loss	—	(12)
Accumulated deficit	(114,266)	(92,059)
Total stockholders' equity	39,758	60,234
Total liabilities and stockholders' equity	$ 69,308	$ 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 June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Collaboration revenue	$ 3,138	$ 1,666	$ 6,191	$ 3,886
Operating expenses:				
Research and development	10,617	9,126	23,020	17,268
General and administrative	3,062	1,979	5,553	3,043
Total operating expenses	13,679	11,105	28,573	20,311
Loss from operations	(10,541)	(9,439)	(22,382)	(16,425)
Other income (expense):				
Interest income	25	259	175	340
Other income, net	—	157	—	327
Total other income, net	25	416	175	667
Net loss	(10,516)	(9,023)	(22,207)	(15,758)
Accretion of redeemable convertible preferred stock to redemption value	—	—	—	(16)
Net loss attributable to common stockholders	$ (10,516)	$ (9,023)	$ (22,207)	$ (15,774)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.34)	$ (0.31)	$ (0.73)	$ (0.80)
Weighted average common shares outstanding, basic and diluted	30,505,773	29,155,790	30,295,557	19,732,542
Comprehensive loss:				
Net loss	$ (10,516)	$ (9,023)	$ (22,207)	$ (15,758)
Other comprehensive income (loss):				
Unrealized gains (losses) on marketable securities, net of tax of $0	2	(6)	12	3
Total other comprehensive income (loss)	2	(6)	12	3
Comprehensive loss	$ (10,514)	$ (9,029)	$ (22,195)	$ (15,755)

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
Issuance of common stock upon exercise of stock options	—	—	541,732	—	97	—	—	97
Stock-based compensation expense	—	—	—	—	885	—	—	885
Unrealized gains on marketable securities	—	—	—	—	—	2	—	2
Net loss	—	—	—	—	—	—	(10,516)	(10,516)
Balances at June 30, 2019	—	$ —	30,660,554	$ 30	$ 153,994	$ —	$ (114,266)	$ 39,758

	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)
Conversion of redeemable convertible preferred stock to common stock	(20,771,850)	(77,167)	13,229,362	13	77,154	—	—	$ 77,167
Issuance of common stock sold in initial public offering, net of underwriting discounts, commissions and offering costs			5,985,000	6	63,942			$ 63,948
Proceeds from private placement concurrent with initial public offering	—	—	416,666	1	4,999	—	—	$ 5,000
Issuance of common stock upon exercise of stock options	—	—	28,162	—	11	—	—	11
Stock-based compensation expense	—	—	—	—	847	—	—	847
Unrealized losses on marketable securities	—	—	—	—	—	(6)	—	(6)
Accretion of redeemable convertible preferred stock to redemption value	—	—	—	—	—	—	—	—
Net loss	—	—	—	—	—	—	(9,023)	(9,023)
Balances at June 30, 2018	—	—	29,867,248	$ 30	$ 149,943	$ (13)	$ (73,285)	$ 76,675

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

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

	Six Months Ended June 30,	
	2019	**2018**
Cash flows from operating activities:		
Net loss	$ (22,207)	$ (15,758)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization expense	661	639
Stock-based compensation expense	1,611	1,326
Realized losses (gains) on sales of marketable securities	2	—
Net amortization (accretion) of premiums (discounts) on marketable securities	(55)	(39)
Non-cash interest expense	—	11
Changes in operating assets and liabilities:		
Accounts receivable	176	(372)
Prepaid expenses and other current assets	(503)	(910)
Operating lease, right-of-use asset	673	—
Other assets	(427)	(419)
Accounts payable	141	503
Accrued expenses and other current liabilities	558	227
Deferred rent	—	(18)
Operating lease liability	(718)	—
Deferred revenue	(2,774)	(1,084)
Net cash provided by (used in) operating activities	(22,862)	(15,894)
Cash flows from investing activities:		
Purchases of property and equipment	(42)	(463)
Purchases of marketable securities	—	(47,682)
Maturities and sales of marketable securities	22,988	12,700
Net cash provided by (used in) investing activities	22,946	(35,445)
Cash flows from financing activities:		
Proceeds from initial public offering, net of underwriting discounts and commissions	—	66,793
Proceeds from private placement concurrent with initial public offering	—	5,000
Proceeds from issuance of common stock upon stock option exercises	108	39
Payments of initial public offering costs	—	(2,056)
Net cash provided by (used in) financing activities	108	69,776
Net increase (decrease) in cash, cash equivalents and restricted cash	192	18,437
Cash, cash equivalents and restricted cash at beginning of period	56,926	29,600
Cash, cash equivalents and restricted cash at end of period	$ 57,118	$ 48,037
Supplemental disclosure of noncash investing and financing information:		
Conversion of redeemable convertible preferred stock into common stock	$ —	$ 77,167
Purchases of property and equipment included in accounts payable	$ —	$ 81
Accretion of redeemable convertible preferred stock to redemption value	$ —	$ 16

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

1. Nature of the Business and Basis of Presentation

Unum Therapeutics Inc. ("Unum" or the "Company") is a clinical-stage biopharmaceutical company focused on developing potentially curative cell therapies to treat a broad range of cancer patients. Unum's novel proprietary platforms include Antibody-Coupled T cell Receptor ("ACTR"), which is based on autologous engineered cellular therapies that combine the cell-killing ability of T cells and the tumor-targeting ability of co-administered antibodies to exert potent antitumor immune responses, and Bolt-On Chimeric Receptor ("BOXR"), which is designed to improve engineered T cells by identifying and incorporating a "bolt-on" transgene to overcome resistance of the solid tumor microenvironment to T cell attack. 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.

On April 1, 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. As of June 30, 2019, no shares have been sold under this Sales Agreement.

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 $22.2 million for the six months ended June 30, 2019 and $34.5 million for the year ended December 31, 2018. As of June 30, 2019, the Company had an accumulated deficit of $114.3 million. The Company expects to continue to generate operating losses in the foreseeable future. As of the issuance date of the interim consolidated financial statements, the Company expects that its cash and cash equivalents 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 June 30, 2019 and for the three and six months ended June 30, 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 June 30, 2019 and results of operations for the three and six months ended June 30, 2019 and 2018 and cash flows for the six months ended June 30, 2019 and 2018 have been made. The Company's results of operations for the three and six months ended June 30, 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 for 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 June 30, 2019, the Company had deferred revenue of $15.2 million related to its collaboration. The Company recognized revenue of $3.1 and $6.2 million during the three and six months ended June 30, 2019, respectively, 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 June 30, 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 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):

	June 30, 2019			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury bills (due within one year)	$ —	$ —	$ —	$ —
	$ —	$ —	$ —	$ —

	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 June 30, 2019 Using:			
	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market funds	$ —	$ 2,619	$ —	$ 2,619
Marketable securities:				
U.S. Treasury bills	—	—	—	$ —
	$ —	$ 2,619	$ —	$ 2,619

	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 and six months ended June 30, 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):

	June 30, 2019	December 31, 2018
Accrued employee compensation and benefits	$ 1,230	$ 1,599
Accrued external research and development expense	2,417	1,799
Accrued external manufacturing costs	1,192	1,015
Other	1,090	1,064
	$ 5,929	$ 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 1 clinical development, and Seattle Genetics provides the funding for those activities. Under the collaboration agreement, the Company recognized revenue of $3.1 million and $1.7 million for the three months ended June 30, 2019 and 2018, respectively, and $6.2 million and $3.9 million for the six months ended June 30, 2019 and 2018 related to research and clinical development activities performed. As of June 30, 2019, deferred revenue of $15.2 million was recorded related to this agreement. As of June 30, 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 1 is estimated to be approximately $42.4 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 June 2019, the Company further amended the Loan Agreement to extend the available date for borrowings from June 30, 2019 to June 30, 2020.

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 June 30, 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 June 30, 2019, 2,370,027 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 June 30, 2019, no shares have been issued under the ESPP and 614,580 shares remain available for issuance.

Stock Option Issuances

During the six months ended June 30, 2019, the Company granted service-based options to participants for the purchase of 1,342,954 shares of common stock with a weighted average grant-date fair value of $2.44 per share.

During the six months ended June 30, 2019, the Company granted options to certain employees for the purchase of 560,000 shares of common stock with a weighted average grant-date fair value of $2.56 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 June 30, 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 June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Research and development expenses	$ 588	$ 607	$ 1,187	$ 1,008
General and administrative expenses	297	240	424	318
Total	$ 885	$ 847	$ 1,611	$ 1,326

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 June 30, 2019	Six Months Ended June 30, 2019
Lease cost		
Operating lease cost	$ 443	$ 886
Variable lease cost (1)	276	581
Total lease cost	$ 719	$ 1,467
Other information		
Operating cash flows used for operating leases	$ 1,512	
Remaining lease term	3.84 years	
Discount rate	6.25%	

(1) The variable lease costs for the quarter ended June 30, 2019 include common area maintenance and other operating charges.

The following table summarizes the future minimum payments due under the operating lease as of June 30, 2019 (in thousands):

Year Ending December 31,		
2019	$	948
2020		1,933
2021		1,989
2022		2,046
2023		689
Total future minimum lease payments		7,605
Less: imputed interest		819
Total operating lease liability	$	6,786
Included in the consolidated balance sheet:		
Current operating lease liability	$	1,543
Operating lease liability, net of current portion		5,243
Total operating lease liability	$	6,786

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 $4.1 million as of June 30, 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 June 30, 2019, the Company had non-cancelable minimum purchase commitments under contract manufacturing agreements for payments totaling $2.4 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 June 30, 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 June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Numerator:				
Net loss	$ (10,516)	$ (9,023)	$ (22,207)	$ (15,758)
Accretion of redeemable convertible preferred stock to redemption value	—	—	—	(16)
Net loss attributable to common stockholders	$ (10,516)	$ (9,023)	$ (22,207)	$ (15,774)
Denominator:				
Weighted average common shares outstanding, basic and diluted	30,505,773	29,155,790	30,295,557	19,732,542
Net loss per share attributable to common stockholders, basic and diluted	$ (0.34)	$ (0.31)	$ (0.73)	$ (0.80)

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:

	June 30,	
	2019	2018
Redeemable convertible preferred shares (as converted to common stock)	—	—
Stock options to purchase common stock	4,685,428	3,830,271
	4,685,428	3,830,271

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 and six months ended June 30, 2019 and 2018.

11. Subsequent Events

Loan and Security Agreement Amendment

On July 31, 2019, the Company amended the Loan Agreement (see Note 6) (the “Fourth Amendment”). The Fourth Amendment amends the Loan Security Agreement to provide for changes to the primary depository requirements with Pacific Western Bank.

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 this Quarterly Report on Form 10-Q and in our Annual Report on Form 10-K for the year ended December 31, 2018.

Overview

We are a clinical-stage biopharmaceutical company focused on developing potentially curative cell therapies to treat a broad range of cancer patients. Our novel proprietary platforms include Antibody-Coupled T cell Receptor (ACTR) and Bolt-On Chimeric Receptor (BOXR). Our preclinical and clinical pipeline programs that are developed from our ACTR and BOXR platforms are designed to improve the targeting and functionality of T cells to expand their use in hematologic and solid tumor cancers.

Our ACTR platform is based on autologous engineered cellular therapies that combine the cell-killing ability of T cells and the tumor-targeting ability of co-administered antibodies to expand the use of T cells in hematologic and solid tumor indications. The BOXR platform is designed to improve engineered T cells by incorporating a "bolt-on" transgene to overcome resistance of the solid tumor microenvironment to T cell attack. BOXR bolt-on transgenes identified in this platform address a variety of immunosuppressive mechanisms of solid tumors and are expressed only in engineered T cells, allowing for the identification of a broad range of genes responsible for improving T cell functionality that may not be amenable to targeting by small molecule or biologic approaches. In addition, the BOXR bolt-on transgenes may be incorporated into several different types of therapeutic T cells.

Our pipeline consists of clinical and preclinical candidates derived from and early discovery efforts related to our ACTR and BOXR platforms. Our clinical programs relating to the ACTR platform consist of ACTR087 and 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 our lead construct, and is modified for improved performance across a number of dimensions, including increased proliferation, cytokine secretion, and persistence in a repeat stimulation test. ACTR707 differs from ACTR087 based on 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, dose-escalating open-label Phase 1 clinical trials called ATTCK-20-2 and ATTCK-20-03. In both Phase 1 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.

We completed patient enrollment and dosing of ACTR707 in combination with rituximab in the first three dose levels (Cohorts 1, 2 and 3) of the ATTCK-20-03 trial and presented preliminary data from patients in Cohorts 1 and 2 at the sixtieth annual American Society of Hematology (ASH) meeting in December 2018 (2018 ASH Meeting). We have subsequently provided updated results from patients in Cohort 3 confirming the clinical activity of ACTR707 with patients from Cohorts 1 and 2, with no dose-limiting toxicities. We completed patient enrollment in the fourth dose level (Cohort 4) and we expect to provide updates to this trial in late 2019.

In November 2018, we announced plans to deprioritize ACTR087 as the lead product candidate in order to advance the newer ACTR construct, ACTR707, in combination with rituximab in adult patients with r/r NHL. As a result of this decision, in May 2019, Unum announced its completion of enrollment in the Phase 1 ATTCK-20-2 trial with ACTR087. In July 2019, Unum announced that the U.S. Food and Drug Administration (FDA) placed a clinical hold on the ATTCK-20-2 trial. The clinical hold was initiated following the submission of a safety report by Unum to the FDA regarding one patient in the safety expansion cohort of the trial (Cohort 3). This patient experienced serious adverse events including neurotoxicity and cytomegalovirus infection, and respiratory distress and subsequently experienced septic shock that was fatal and reported by the investigator as related to ACTR087. Patients who previously received ACTR087 and have ongoing clinical responses continue to receive rituximab infusions, with continued monitoring for adverse events. Since the initial announcement, the FDA has communicated the ATTCK-20-2 trial as a partial clinical hold. We continue to work closely with the FDA to further review these events and plans to report data from 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 1 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 higher dose cohorts and expect to report data from multiple dose cohorts in the second half of 2019.

Our fourth program is ACTR707 used in combination with trastuzumab as a potential treatment for advanced HER2+ solid tumor cancers, and in December 2018 we initiated a Phase 1 multi-center trial called ATTCK-34-01. We plan to continue to enroll patients into this dose escalation trial and to report clinical trial updates, including preliminary safety data 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 preclinical safety testing and GMP process development, to support filing of an investigational new drug (IND) application and plan to present preclinical data regarding BOXR1030 in the second half of 2019.

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 $22.2 million for the six months ended June 30, 2019. As of June 30, 2019, we had an accumulated deficit of $114.3 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 June 30, 2019, we had cash and cash equivalents of $55.9 million and available borrowings under our loan and security agreement of $15.0 million. We expect that our cash and cash equivalents 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 1 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 $1.7 million for the three months ended June 30, 2019 and 2018, respectively, and $6.2 million and $3.9 million for the six months ended June 30, 2019 and 2018 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 June 30, 2019 and 2018

The following table summarizes our results of operations for the three months ended June 30, 2019 and 2018:

	Three Months Ended June 30,		
	2019	2018	Change
	(in thousands)		
Collaboration revenue	$ 3,138	$ 1,666	$ 1,472
Operating expenses:			
Research and development	10,617	9,126	1,491
General and administrative	3,062	1,979	1,083
Total operating expenses	13,679	11,105	2,574
Loss from operations	(10,541)	(9,439)	(1,102)
Other income (expense):			
Interest income	25	259	(234)
Other income, net	—	157	(157)
Total other income, net	25	416	(391)
Net loss	$ (10,516)	$ (9,023)	$ (1,493)

Collaboration Revenue

Collaboration revenue recognized during the three months ended three months ended June 30, 2019 and 2018 of $3.1 million and $1.7 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 2019 as compared to same period in 2018 was due primarily to increased efforts to advance our programs.

Research and Development Expenses

	Three Months Ended June 30,		
	2019	2018	Change
	(in thousands)		
Direct research and development expenses by program:			
ACTR087 used in combination with rituximab	$ 674	$ 890	$ (216)
ACTR707 used in combination with rituximab	1,593	1,300	293
ACTR087 used in combination with SEA-BCMA	1,184	719	465
ACTR707 used in combination with trastuzumab	642	—	642
Unallocated expenses:			
Personnel related (including stock-based compensation)	3,825	3,036	789
Laboratory supplies, facility related and other	2,699	3,181	(482)
Total research and development expenses	$ 10,617	$ 9,126	$ 1,491

Research and development expenses increased to $10.6 million for the three months ended June 30, 2019 from $9.1 million for the three months ended June 30, 2018. The overall increase in R&D expense during the three months ended June 30, 2019 compared to the three months ended June 30, 2018 primarily relates to increased clinical activity related to our on-going Phase 1 clinical trials. Direct external costs related to our ACTR087 in combination with rituximab program decreased $0.2 million primarily due a decrease in manufacturing and clinical costs as we completed enrollment in the first quarter of 2019. The increase in direct external costs related to our ACTR707 in combination with rituximab program of $0.3 million was primarily due to increased patient manufacturing and clinical costs in the current year compared to the same period in 2018. The increase in direct external costs incurred for our ACTR087 used in combination with SEA-BCMA program of $0.5 million primarily related to increased manufacturing and clinical trial costs related to our Phase 1 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 $0.8 million included in unallocated expenses was primarily a result of an increase in overall compensation resulting from increased headcount in the three months ended June 30, 2019 and 2018. The decrease in laboratory supplies, facility-related, and other costs of $0.5 million was primarily due to streamlining our facilities costs related to our manufacturing processes.

General and Administrative Expenses

General and administrative expenses for the three months ended June 30, 2019 were $3.1 million, compared to $2.0 million for the three months ended June 30, 2018. The increase in general and administrative expenses was primarily due to increased personnel costs of $0.3 million and professional and consulting fees of $0.7 million. The increase in personnel-related costs was primarily due to increased headcount. 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.

Interest Income

Interest income for the three months ended June 30, 2019 and 2018 was less than $0.1 million and $0.3 million, respectively. Interest income decreased primarily as a result of lower invested balances in the current year due to the use of cash proceeds received from our IPO and concurrent private placement to fund current operations.

Other Income, Net

Other income, net for the three months ended June 30, 2018 was $0.2 million primarily due to sublease income.

Comparison of the six months ended June 30, 2019 and 2018

The following table summarizes our results of operations for the six months ended six months ended June 30, 2019 and 2018:

	Six Months Ended June 30,		
	2019	2018	Change
	(in thousands)		
Collaboration revenue	$ 6,191	$ 3,886	$ 2,305
Operating expenses:			
Research and development	23,020	17,268	5,752
General and administrative	5,553	3,043	2,510
Total operating expenses	28,573	20,311	8,262
Loss from operations	(22,382)	(16,425)	(5,957)
Other income (expense):			
Interest income	175	340	(165)
Other income, net	—	327	(327)
Total other income, net	175	667	(492)
Net loss	$ (22,207)	$ (15,758)	$ (6,449)

Collaboration Revenue

Collaboration revenue recognized during the six months ended June 30, 2019 and 2018 of $6.2 million and $3.9 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 six months of 2019 as compared to the first six months of 2018 was due primarily to increased efforts to advance our programs.

Research and Development Expenses

	Six Months Ended June 30,		
	2019	2018	Change
		(in thousands)	
Direct research and development expenses by program:			
ACTR087 used in combination with rituximab	$ 2,461	$ 1,803	$ 658
ACTR707 used in combination with rituximab	2,908	2,442	466
ACTR087 used in combination with SEA-BCMA	2,694	1,345	1,349
ACTR707 used in combination with trastuzumab	886	—	886
Unallocated expenses:			
Personnel related (including stock-based compensation)	7,602	5,751	1,851
Laboratory supplies, facility related and other	6,469	5,927	542
Total research and development expenses	$ 23,020	$ 17,268	$ 5,752

Research and development expenses increased to $23.0 million for the six months ended June 30, 2019 from $17.3 million for the six months ended June 30, 2018. The overall increase in R&D expense during the six months ended June 30, 2019 compared to the six months ended June 30, 2018 primarily relates to increased clinical activity related to our on-going Phase 1 clinical trials. The increase in direct external costs related to our ACTR087 used in combination with rituximab program of $0.7 million was primarily due to an increase in patient manufacturing during 2019 as compared to 2018. The increase in direct external costs related to our ACTR707 in combination with rituximab program of $0.5 million was primarily due to increased patient manufacturing and clinical costs in the current year compared to the same period in 2018. The increase in direct external costs incurred for our ACTR087 used in combination with SEA-BCMA program of $1.3 million primarily related to increased patient manufacturing and clinical costs related to our Phase 1 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 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 $1.9 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 six months ended June 30, 2019 and 2018 included stock-based compensation expense of $1.2 million and $1.0 million, respectively. The increase in laboratory supplies, facility-related, and other costs of $0.5 million was primarily due to increased facilities costs related to scaling our manufacturing processes.

General and Administrative Expenses

General and administrative expenses for the six months ended June 30, 2019 were $5.6 million, compared to $3.0 million for the six months ended June 30, 2018. The increase in general and administrative expenses was primarily due to increased professional and consulting fees of $1.5 million, increases in personnel-related costs of $0.6 million and facility related and other costs of $0.4 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 six months ended June 30, 2019 and 2018 was $0.2 million and $0.3 million, respectively. Interest income decrease primarily as a result of lower invested balances due to the use of cash proceeds received from our IPO and concurrent private placement to fund current operations.

Other Income, Net

Other income, net for the six months ended June 30, 2018 was $0.3 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 June 30, 2019, we had cash and cash equivalents of $55.9 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:

	Six Months Ended June 30,	
	2019	2018
	(in thousands)	
Cash used in operating activities	$ (22,862)	$ (15,894)
Cash provided by investing activities	22,946	(35,445)
Cash provided by (used in) financing activities	108	69,776
Net increase (decrease) in cash, cash equivalents and restricted cash	$ 192	$ 18,437

Operating Activities

During the six months ended June 30, 2019, operating activities used $22.9 million of cash, primarily resulting from our net loss of $22.2 million and from net cash used by changes in our operating assets and liabilities of $2.9 million, partially offset by net non-cash charges of $2.2 million. Net cash used by changes in our operating assets and liabilities for the six months ended June 30, 2019 consisted primarily of a $2.8 million decrease in deferred revenue, a $0.2 million increase in accounts receivable and a $0.7 million decrease in accounts payable and accrued expenses and other current liabilities, all partially offset by a $0.9 million increase in prepaid expenses and other current assets and other assets.

During the six months ended June 30, 2018, operating activities used $15.9 million of cash, primarily resulting from our net loss of $15.8 million and from net cash used by changes in our operating assets and liabilities of $2.1 million, partially offset by net non-cash charges of $1.9 million. Net cash used by changes in our operating assets and liabilities for the six months ended June 30, 2018 consisted primarily of a $1.1 million decrease in deferred revenue, after the impact of the adoption of the new revenue standard (ASC 606), a $0.9 million increase in prepaid expenses and other current assets, a $0.4 million increase in other assets and a $0.4 million increase in accounts receivable, partially offset by a $0.7 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 six months ended June 30, 2019, net cash provided by investing activities of $22.9 million consisted of maturities and sales of marketable securities of $23.0 million offset by purchases of property and equipment of $0.1 million. During the six months ended June 30, 2018, net cash used in investing activities was $35.4 million, consisting of net purchases of marketable securities of $35.0 million and purchases of property and equipment of $0.5 million.

Financing Activities

During the six months ended June 30, 2019, net cash provided by financing activities was $0.1 million from the proceeds from the issuance of common stock upon stock option exercises. During the six months ended June 30, 2018, net cash provided by financing activities was $69.8 million, consisting primarily of proceeds from our IPO in April 2018, net of underwriting discounts and commissions, of $66.8 million and proceeds from our concurrent private placement of $5.0 million, partially offset by payments of offering costs related to our IPO of $2.1 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. We further amended the Loan Agreement in June 2019 to extend the available date for borrowings to June 30, 2020. No amounts had been borrowed as term loans under the Loan Agreement as of June 30, 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 June 30, 2019, we had cash and cash equivalents of $55.9 million and available borrowings under our Loan Agreement of $15.0 million. We expect that our cash and cash equivalents 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 Chief Financial Officer (our principal executive officer and principal financial and accounting officer, respectively), evaluated the effectiveness of our disclosure controls and procedures as of June 30, 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 June 30, 2019, our President and Chief Executive Officer and our Chief Financial Officer 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 June 30, 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. Other than as disclosed below, there have been no material changes to the Company's risk factors as set forth in Part I, Item 1A of the Company's Annual Report on Form 10-K, as filed with the SEC.

Our business is highly dependent on the success of our lead lymphoma product candidate, ACTR707 used in combination with rituximab, our other ACTR-antibody combination that we develop, other ACTR-antibody combinations that we may develop, and potential BOXR product candidates that we develop, including BOXR1030.

Our business and future success depend on our ability to obtain regulatory approval of and then successfully commercialize our lead product candidate, ACTR707 used in combination with rituximab, other product combinations that we develop using antibodies in combination with ACTR087, ACTR707, BOXR 1030 and other product candidates that we develop using our BOXR platform. All of our product candidates, including ACTR707 used in combination with rituximab, are in the early stages of development and will require additional clinical and nonclinical development, regulatory review and approval, substantial investment, access to sufficient commercial manufacturing capacity and significant marketing efforts before we can generate any revenue from product sales. In addition, because most of our product candidates are based on our ACTR platform, if both ACTR087 and ACTR707 constructs encounter safety, efficacy, or manufacturing problems, developmental delays, regulatory, or commercialization difficulties or other problems, our development plans and business would be significantly harmed. For example, our Phase 1 clinical trial for ACTR087 used in combination with rituximab was placed on clinical hold in July 2019, following submission of a safety report to the FDA. We are working closely with the FDA to review the events and have the clinical hold removed as quickly as possible, but we cannot guarantee that the FDA will remove the clinical hold.

Our clinical trials may fail to demonstrate adequately the safety and efficacy of any of our product candidates, which would prevent or delay regulatory approval and commercialization.

Before obtaining regulatory approvals for the commercial sale of our product candidates, including for our lead lymphoma product candidate ACTR707 used in combination with rituximab, any ACTR T cell product candidates used in combination with other antibodies, or any BOXR product candidates, we must demonstrate through lengthy, complex and expensive preclinical testing and clinical trials that our product candidates are both safe and effective for use in each target indication. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process, and, because our product candidates are in an early stage of development, there is a high risk of failure and we may never succeed in developing marketable products. The results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. There is typically an extremely high rate of attrition from the failure of product candidates proceeding through clinical trials. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy profile despite having progressed through preclinical studies and initial clinical trials. A number of companies in the biopharmaceutical industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy, insufficient durability of efficacy, or unacceptable safety issues, notwithstanding promising results in earlier trials. Most product candidates that commence clinical trials are never approved as products.

Any clinical trials that we may conduct may not demonstrate the efficacy and safety necessary to obtain regulatory approval to market our product candidates. If the results of our ongoing or future clinical trials are inconclusive with respect to the efficacy of our product candidates, if we do not meet the clinical endpoints with statistical and clinically meaningful significance, or if there are safety concerns associated with our product candidates, we may be prevented or delayed in obtaining marketing approval for such product candidates. In some instances, there can be significant variability in safety or efficacy results between different clinical trials of the same product candidate due to numerous factors, including changes in trial procedures set forth in protocols, differences in the size and type of the patient populations, changes in and adherence to the clinical trial protocols and the rate of dropout among clinical trial participants.

We designed our Phase 1 clinical trials of ACTR087 and ACTR707, each used in combination with rituximab, called ATTCK-20-2 and ATTCK-20-03, respectively, primarily to assess safety and efficacy in adult patients with r/r NHL. We selected ACTR707 used in combination with rituximab to be the lead lymphoma product candidate to advance to further clinical development. However, the preliminary results from the ATTCK-20-03 Phase 1 trial may not be indicative of the final analysis of this Phase 1 clinical trial, especially given the small number of patients that have dosed in this trial. In addition, the Phase 1 results may not predict results for any further clinical testing of either ACTR087 or ACTR707 used in combination with rituximab or other product candidates that we have developed, such as ACTR087 used in combination with SEA-BCMA and ACTR T cells in combination with trastuzumab for the treatment of patients with HER2+ advanced cancers, or may develop in the future, using antibodies in combination with ACTR087 and ACTR707 or in different indications.

In July 2019, we announced that the FDA placed a clinical hold (since updated as a partial clinical hold) on the Phase 1 trial (ATTCK-20-2) evaluating ACTR087 in combination with rituximab in adult patients with r/r NHL. The clinical hold was initiated following the submission of a safety report by Unum to the FDA regarding one patient in the safety expansion cohort of the trial (Cohort 3). This patient experienced serious adverse events including neurotoxicity and cytomegalovirus infection, and respiratory distress. As an update to this case, this patient subsequently experienced septic shock that was fatal and reported by the investigator as related to ACTR087. Patients who previously received ACTR087 and have ongoing clinical responses continue to receive rituximab infusions, with continued monitoring for adverse events. In November 2018, we selected ACTR707 used in combination with rituximab to be the lead lymphoma product candidate for further clinical development, and the FDA may determine, at any time, that there is an unacceptable safety risk for patients and we may be required to stop the trial prior to the conclusion of the planned enrollment.

In addition, even if the ATTCK-20-03 trial and other currently ongoing or planned trials, such as ATTCK-17-01 or ATTCK-34-01 Phase 1 trials, are successfully initiated and/or completed, as applicable, clinical data are often susceptible to varying interpretations and analyses, and we cannot guarantee that the FDA or foreign regulatory authorities will interpret the results as we do, and more trials could be required before we submit our product candidates for approval. For instance, although our lead product candidates will be dosed in refractory patients with antibodies that the patients have already received, we plan to test future product candidates in patients that have never received the co-administered antibody in prior treatment and with antibodies that have never been independently evaluated for safety or efficacy. As a result, it may be difficult to demonstrate that the ACTR construct, rather than the antibody alone, is causing an observed effect. We cannot guarantee that the FDA will view the ACTR construct as having efficacy even if positive results are observed in these clinical trials. To the extent that the results of the trials are not satisfactory to the FDA or foreign regulatory authorities for support of a marketing application, approval of our product candidates may be significantly delayed, or we may be required to expend significant additional resources, which may not be available to us, to conduct additional trials in support of potential approval of our product candidates.

Our product candidates may cause undesirable side effects or have other properties that could halt their clinical development, prevent their regulatory approval, require expansion of the trial size, limit their commercial potential, or result in significant negative consequences.

Undesirable side effects caused by our product candidates could cause us or regulatory authorities, including institutional review boards (IRBs), to interrupt, delay, or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign regulatory authorities. Further, clinical trials by their nature utilize a sample of the potential patient population. With a limited number of subjects and limited duration of exposure, rare and severe side effects of our product candidates may only be uncovered with a significantly larger number of patients exposed to the drug. Because of our dose escalation design for our clinical trials, undesirable side effects could also result in an expansion in the size of our clinical trials, increasing the expected costs and timeline of our clinical trials. Additionally, results of our trials could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics.

In certain trials of CAR-based products, which also use an engineered T cell, side effects, such as CRS, neurotoxicity, cytomegalovirus infection, and respiratory distress, arose that resulted in risk, injury, or death to the patients. We observed some of these side effects in the second dose level and the safety expansion cohort level of our Phase 1 clinical trial of ACTR087 used in combination with rituximab, called ATTCK-20-2. These events resulted in the FDA placing the trial on clinical hold in December 2017 pending submission of certain information relating to the ATTCK-20-2 clinical trial. The clinical hold was removed in February 2018, following review of this information by the FDA. However, a second clinical hold was placed on the trial in July 2019 following submission of a safety report to the FDA. We cannot guarantee that the FDA will remove the clinical hold based on the additional information that we provide. We will likely continue to observe some or all of these side effects in our clinical trials at additional dosage levels. We have established safety management and monitoring guidelines for clinical investigators to detect and treat potential side effects. However, there is no guarantee that these medical interventions will be effective in preventing negative effects to the patient. Additionally, if we continue to observe severe side effects in our clinical trials, our ongoing clinical trials may be halted or put on an additional clinical hold prior to completion if there is an unacceptable safety risk for patients.

Autoimmune reaction triggered by an interaction between a patient's naturally occurring antibodies and ACTR T cells is a theoretical safety risk unique to the ACTR approach. If a patient's self-generated antibodies were directed to a target expressed on the surface of cells in normal tissue (i.e., autoantibodies), ACTR would be directed to attack these tissues, potentially resulting in off-tumor effects. These autoantibodies may be present whether or not the patient has an active autoimmune disease. In our clinical testing, we have taken steps to minimize the likelihood of this happening (e.g., excluding patients with a history of autoimmune disease from our trials and screening for the presence of certain autoantibodies). To date, we have not observed any autoimmune adverse effects in clinical testing of ACTR. There is no guarantee, however, that we will not observe autoimmune reactions in the future and no guarantee that if we do, that we will be able to implement interventions to address the risk.

If unacceptable toxicities arise in the development of our product candidates, we could suspend or terminate our trials or the FDA or comparable foreign regulatory authorities, or local regulatory authorities such as IRBs, could order us to cease clinical trials. Competent national health authorities, such as the FDA, could also deny approval of our product candidates for any or all targeted indications. Treatment-related side effects could also affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff, as toxicities resulting from T cell therapy are not normally encountered in the general patient population and by medical personnel. We expect to have to train medical personnel using ACTR or BOXR to understand the respective side effect profiles of ACTR and BOXR for all clinical trials and upon any commercialization of any product candidates, if approved. Inadequate training in recognizing or managing the potential side effects of ACTR or BOXR could result in patient deaths. Any of these occurrences may harm our business, financial condition and prospects significantly.

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 June 30, 2019, we estimate that we have used approximately $45.4 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	Third Amendment to Loan and Security Agreement by and between Pacific Western Bank and Registrant dated as of June 21, 2019 (incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K (File No. 001-38443) filed June 25, 2019)
10.2#	Employment Agreement by and between the Registrant and Matthew Osborne dated as of June 17, 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

\# Indicates a management contract or any compensatory plan, contract or arrangement.

† 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: August 12, 2019

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

Date: August 12, 2019

By: /s/ Matthew Osborne
Matthew Osborne
Chief Financial Officer
(Principal Financial Officer)

Exhibit 10.2

EMPLOYMENT AGREEMENT

This Employment Agreement ("Agreement") is made between Unum Therapeutics Inc., a Delaware corporation (the "Company") and Matthew Osborne (the "Executive").

WHEREAS, the Company desires to employ the Executive and the Executive desires to be employed by the Company beginning on June 17, 2019 (the "Effective Date") on the terms contained herein.

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Employment.

(a) Term. The term of this Agreement shall commence on the Effective Date and continue until the Date of Termination (as defined herein) (such period shall hereinafter be referred to as the "Term"). No provision of this Agreement shall be construed as altering the "at will" nature of Executive's employment, and the Executive's employment may be terminated at any time for any reason.

(b) Position and Duties. During the Term, the Executive shall serve as the Chief Financial Officer of the Company and shall have such powers and duties as may from time to time be prescribed by the Chairman of the Board of Directors of the Company (the "Board"), the Chief Executive Officer of the Company (the "CEO") or other authorized executive, provided that such duties are consistent with the Executive's position or other positions that he may hold from time to time. The Executive shall devote his full working time and efforts to the business and affairs of the Company. Notwithstanding the foregoing, the Executive may serve on other boards of directors, with the approval of the CEO, or engage in religious, charitable or other community activities as long as such services and activities are disclosed to the CEO and do not materially interfere with the Executive's performance of his duties to the Company as provided in this Agreement.

2. Compensation and Related Matters.

(a) Base Salary. During the Term, the Executive's initial annual base salary shall be $370,000. The Executive's base salary may be redetermined annually by the Board or the Compensation Committee. The base salary in effect at any given time is referred to herein as "Base Salary." The Base Salary shall be payable in a manner that is consistent with the Company's usual payroll practices for senior executives.

(b) Incentive Compensation. During the Term, the Executive shall be eligible to receive cash incentive compensation as determined by the Board or the Compensation Committee from time to time. The Executive's target annual incentive compensation shall be 40% of his Base Salary. To earn incentive compensation, the Executive must be employed by the Company on the day such incentive compensation is paid.

(c) Expenses. The Executive shall be entitled to receive prompt reimbursement for all reasonable expenses incurred by him during the Term in performing services hereunder, in accordance with the policies and procedures then in effect and established by the Company for its senior executive officers.

(d) Other Benefits. During the Term, the Executive shall be eligible to participate in or receive benefits under the Company's employee benefit plans in effect from time to time, subject to the terms of such plans.

(e) Vacations. During the Term, the Executive shall be subject to the Company's vacation policy as in effect from time to time at the Company. The Executive shall also be entitled to all paid holidays given by the Company to its executives.

(f) Equity.

(i) New Hire Time-based Option Award. Subject to approval by the Board, the Company shall grant the Executive an option to purchase 190,000 shares of the Company's common stock (the "New Hire Time–based Option Award"). The exercise price per share of the New Hire Time–based Option Award will be the fair market value as determined by the Board when the New Hire Time–based Option Award is granted. The New Hire Time–based Option Award will be subject to the terms of and contingent upon the Executive's execution of a stock option award agreement issued pursuant to the Company's 2018 Stock Option and Incentive Plan (the "Plan"). The New Hire Time–based Option Award shall become vested and exercisable over a four-year period, with 25% of the Initial Option Award vesting 12 months after the Effective Date and the remaining 75% vesting in equal monthly installments over the 36 months thereafter, contingent upon the Executive remaining in continuous employment with the Company through each applicable vesting date.

(ii) Performance-based Option Award. Subject to approval by the Board, the Company may at its discretion grant the Executive an option to purchase up to 100,000 shares of the Company's common stock (the "Performance-based Option Award") subject to vesting based on the Company's achievement of certain performance-based metrics that may be determined by the Board or the Compensation Committee. The exercise price per share of any Performance-based Option Award will be the fair market value as determined by the Board when any Performance-based Option Award may be granted. Other terms applicable to any Performance-based Option Award will be subject to terms as determined by the Board or the Compensation Committee.

3. Termination. During the Term, the Executive's employment hereunder may be terminated without any breach of this Agreement under the following circumstances:

(a) Death. The Executive's employment hereunder shall terminate upon his death.

(b) Disability. The Company may terminate the Executive's employment if he is disabled and unable to perform the essential functions of the Executive's then existing position or positions under this Agreement with or without reasonable accommodation for a period of 180 days (which need not be consecutive) in any 12-month period. If any question shall arise as to whether during any period the Executive is disabled so as to be unable to perform the essential functions of the Executive's then existing position or positions with or without reasonable accommodation, the Executive may, and at the request of the Company shall, submit to the Company a certification in reasonable detail by a physician selected by the Company to whom the Executive or the Executive's guardian has no reasonable objection as to whether the Executive is so disabled or how long such disability is expected to continue, and such certification shall for the purposes of this Agreement be conclusive of the issue. The Executive shall cooperate with any reasonable request of the physician in connection with such certification. If such question shall arise and the Executive shall fail to submit such certification, the Company's determination of such issue shall be binding on the Executive. Nothing in this Section 3(b) shall be construed to waive the Executive's rights, if any, under existing law including, without limitation, the Family and Medical Leave Act of 1993, 29 U.S.C. §2601 *et seq*. and the Americans with Disabilities Act, 42 U.S.C. §12101 *et seq.*

(c) Termination by Company for Cause. The Company may terminate the Executive's employment hereunder for Cause. For purposes of this Agreement, "Cause" shall mean: (i) conduct by the Executive constituting a material act of misconduct in connection with the performance of his duties, including, without limitation, misappropriation of funds or property of the Company or any of its subsidiaries or affiliates other than the occasional, customary and de minimis use of Company property for personal purposes; (ii) the commission by the Executive of any felony or a misdemeanor involving moral turpitude, deceit, dishonesty or fraud, or any conduct by the Executive that would reasonably be expected to result in material injury or reputational harm to the Company or any of its subsidiaries and affiliates if he were retained in his position; (iii) continued non-performance by the Executive of his duties hereunder (other than by reason of the Executive's physical or mental illness, incapacity or disability) which has continued for more than 30 days following written notice of such non-performance from the CEO; (iv) a breach by the Executive of any of the Continuing Obligations (as defined in Section 7 below); (v) a material violation by the Executive of the Company's written employment policies; or (vi) failure to cooperate with a bona fide internal investigation or an investigation by regulatory or law enforcement authorities, after being instructed by the Company to cooperate, or the willful destruction or failure to preserve documents or other materials known to be relevant to such investigation or the inducement of others to fail to cooperate or to produce documents or other materials in connection with such investigation.

(d) Termination Without Cause. The Company may terminate the Executive's employment hereunder at any time without Cause. Any termination by the Company of the Executive's employment under this Agreement which does not constitute a termination for Cause under Section 3(c) and does not result from the death or disability of the Executive under Section 3(a) or (b) shall be deemed a termination without Cause.

(e) Termination by the Executive. The Executive may terminate his employment hereunder at any time for any reason, including but not limited to Good Reason. For purposes of this Agreement, "Good Reason" shall mean that the Executive has complied with the "Good Reason Process" (hereinafter defined) following the occurrence of any of the following events: (i) a material diminution in the Executive's responsibilities, authority or duties, including a material change in reporting relationship; (ii) a material diminution of more than 10% in the Executive's Base Salary except for across-the-board salary reductions based on the Company's financial performance similarly affecting all or substantially all senior management employees of the Company; (iii) a change in the geographic location at which the Executive provides services to the Company more than sixty (60) miles away from the current location; or (iv) the material breach of this Agreement by the Company. "Good Reason Process" shall mean that (i) the Executive reasonably determines in good faith that a "Good Reason" condition has occurred; (ii) the Executive notifies the Company in writing of the first occurrence of the Good Reason condition within 60 days of the first occurrence of such condition; (iii) the Executive cooperates in good faith with the Company's efforts, for a period not less than 30 days following such notice (the "Cure Period"), to remedy the condition; (iv) notwithstanding such efforts, the Good Reason condition continues to exist; and (v) the Executive terminates his employment within 60 days after the end of the Cure Period. If the Company cures the Good Reason condition during the Cure Period, Good Reason shall be deemed not to have occurred.

(f) Notice of Termination. Except for termination as specified in Section 3(a), any termination of the Executive's employment by the Company or any such termination by the Executive shall be communicated by written Notice of Termination to the other party hereto. For purposes of this Agreement, a "Notice of Termination" shall mean a notice which shall indicate the specific termination provision in this Agreement relied upon.

(g) Date of Termination. "Date of Termination" shall mean: (i) if the Executive's employment is terminated by his death, the date of his death; (ii) if the Executive's employment is terminated on account of disability under Section 3(b) or by the Company for Cause under Section 3(c), the date on which Notice of Termination is given; (iii) if the Executive's employment is terminated by the Company under Section 3(d), the date on which a Notice of Termination is given; (iv) if the Executive's employment is terminated by the Executive under Section 3(e) other than for Good Reason, 14 days after the date on which a Notice of Termination is given, and (v) if the Executive's employment is terminated by the Executive under Section 3(e) for Good Reason, the date on which a Notice of Termination is given after the end of the Cure Period. Notwithstanding the foregoing, in the event that the Executive gives a Notice of Termination to the Company, the Company may unilaterally accelerate the Date of Termination and such acceleration shall not result in a termination by the Company for purposes of this Agreement.

4. Compensation Upon Termination.

(a) Termination Generally. If the Executive's employment with the Company is terminated for any reason, the Company shall pay or provide to the Executive (or to his authorized representative or estate) (i) any Base Salary earned through the Date of Termination, unpaid expense reimbursements (subject to, and in accordance with, Section 2(c) of this Agreement) and unused vacation that accrued through the Date of Termination on or before the time required by law but in no event more than 30 days after the Executive's Date of Termination; and (ii) any vested benefits the Executive may have under any employee benefit plan of the Company through the Date of Termination, which vested benefits shall be paid and/or provided in accordance with the terms of such employee benefit plans (collectively, the "Accrued Benefit").

(b) Termination by the Company Without Cause or by the Executive for Good Reason. During the Term, if the Executive's employment is terminated by the Company without Cause as provided in Section 3(d), or the Executive terminates his employment for Good Reason as provided in Section 3(e), then the Company shall pay the Executive his Accrued Benefit. In addition, subject to (i) the Executive signing a separation agreement and release in a form and manner satisfactory to the Company, which shall include, without limitation, a general release of claims against the Company and all related persons and entities, a reaffirmation of all of the Executive's Continuing Obligations, and, in the Company's sole discretion, a one-year post-employment noncompetition agreement, and shall provide that if the Executive breaches any of the Continuing Obligations, all payments by the Company to the Executive pursuant to this Section 4(b) shall immediately cease (the "Separation Agreement and Release"), and (ii) the Separation Agreement and Release becoming irrevocable, all within 60 days after the Date of Termination (or such shorter period as set forth in the Separation Agreement and Release), which shall include a seven (7) business day revocation period:

(i) the Company shall pay the Executive a lump sum in cash in an amount equal to nine (9) months of the Executive's current Base Salary (the "Severance Amount"); provided in the event the Executive is entitled to any payments pursuant to the Restrictive Covenants Agreement, the Severance Amount received in any calendar year will be reduced by the amount the Executive is paid in the same such calendar year pursuant to the Restrictive Covenants Agreement (the "Restrictive Covenants Agreement Setoff"); and

(ii) notwithstanding anything to the contrary in any applicable option agreement or other stock-based award agreement, all time-based stock options and other stock-based awards subject to time-based vesting held by the Executive (including performance grants with a time-based vesting component but only if the applicable performance metric(s) have been achieved prior the Date of Termination) and which would have vested if he had remained employed for an additional nine (9) following the Date of Termination (the "Time-Based Equity Awards") shall immediately accelerate and become fully exercisable or nonforfeitable as of the later of (i) the Date of Termination or (ii) the Effective Date of the Separation Agreement and Release (the "Accelerated Vesting Date"); *provided* that any termination or forfeiture of any shares that may accelerate pursuant this subsection will be delayed until the Effective Date of the

Separation Agreement and Release and will only occur if the vesting pursuant to this subsection does not occur due to the absence of the Separation Agreement and Release becoming fully effective within the time period set forth therein. Notwithstanding the foregoing, no additional vesting of the Time-Based Equity Awards shall occur during the period between the Executive's Date of Termination and the Accelerated Vesting Date; and

(iii) if the Executive was participating in the Company's group health plan immediately prior to the Date of Termination and elects COBRA health continuation, then the Company shall pay to the Executive a monthly cash payment for nine (9) or the Executive's COBRA health continuation period, whichever ends earlier, in an amount equal to the monthly employer contribution that the Company would have made to provide health insurance to the Executive if the Executive had remained employed by the Company; and

(iv) The amounts payable under this Section 4(b) shall be paid or commence to be paid within 60 days after the Date of Termination; provided, however, that if the 60-day period begins in one calendar year and ends in a second calendar year, such payments shall be paid or commence to be paid in the second calendar year by the last day of such 60-day period; provided, further, that the initial payment shall include a catch-up payment to cover amounts retroactive to the day immediately following the Date of Termination. Notwithstanding the foregoing, if the Executive breaches any of the provisions contained in Section 7 of this Agreement, all payments under this Section 4(b) shall immediately cease.

5. Change in Control Payment. The provisions of this Section 5 set forth certain terms of an agreement reached between the Executive and the Company regarding the Executive's rights and obligations upon the occurrence of a Change in Control of the Company. These provisions are intended to assure and encourage in advance the Executive's continued attention and dedication to his assigned duties and his objectivity during the pendency and after the occurrence of any such event. These provisions shall apply in lieu of, and expressly supersede, the provisions of Section 4(b) regarding severance pay and benefits upon a termination of employment, if such termination of employment occurs within 12 months after the occurrence of the first event constituting a Change in Control. These provisions shall terminate and be of no further force or effect beginning 12 months after the occurrence of a Change in Control.

(a) Change in Control. During the Term, if within 12 months after a Change in Control, the Executive's employment is terminated by the Company without Cause as provided in Section 3(d) or the Executive terminates his employment for Good Reason as provided in Section 3(e), then, subject to (i) the signing of the Separation Agreement and Release by the Executive, which shall be defined in the same manner as set forth in Section 4(b), except that it shall provide that if the Executive breaches any of the Continuing Obligations, all payments by the Company to the Executive pursuant to this Section 5(a) shall immediately cease, and (ii) the Separation Agreement and Release becoming irrevocable, all within 60 days after the Date of Termination (or such shorter period as set forth in the Separation Agreement and Release):

(i) the Company shall pay the Executive a lump sum in cash in an amount equal to the sum of (A) twelve (12) months of the Executive's current Base Salary (or the Executive's Base Salary in effect immediately prior to the Change in Control, if higher) plus (B) 100% percent of the Executive's target bonus for the then-current year (the "Change in Control Payment"); provided the Change in Control Payment shall be reduced by the amount of the Restrictive Covenants Agreement Setoff, if applicable, paid or to be paid in the same calendar year; and

(ii) notwithstanding anything to the contrary in any applicable option agreement or other stock-based award agreement, all time-based stock options and other stock-based awards subject to time-based vesting held by the Executive (including performance grants with a time-based vesting component but only if the applicable performance metric(s) have been achieved prior the Date of Termination) shall immediately accelerate and become fully exercisable or nonforfeitable as of the Accelerated Vesting Date; *provided* that any termination or forfeiture of any shares that may accelerate pursuant to this subsection will be delayed until the Effective Date of the Separation Agreement and Release and will only occur if the vesting pursuant to this subsection does not occur due to the absence of the Separation Agreement and Release becoming fully effective within the time period set forth therein; and

(iii) if the Executive was participating in the Company's group health plan immediately prior to the Date of Termination and elects COBRA health continuation, then the Company shall pay to the Executive a monthly cash payment for twelve (12) or the Executive's COBRA health continuation period, whichever ends earlier, in an amount equal to the monthly employer contribution that the Company would have made to provide health insurance to the Executive if the Executive had remained employed by the Company; and

(iv) The amounts payable under this Section 5(a) shall be paid or commence to be paid within 60 days after the Date of Termination; provided, however, that if the 60-day period begins in one calendar year and ends in a second calendar year, such payments shall be paid or commence to be paid in the second calendar year by the last day of such 60-day period; provided, further, that the initial payment shall include a catch-up payment to cover amounts retroactive to the day immediately following the Date of Termination.

(b) Additional Limitation.

(i) Anything in this Agreement to the contrary notwithstanding, in the event that the amount of any compensation, payment or distribution by the Company to or for the benefit of the Executive, whether paid or payable or distributed or distributable pursuant to the terms of this Agreement or otherwise, calculated in a manner consistent with Section 280G of the Code and the applicable regulations thereunder (the "Aggregate Payments"), would be subject to the excise tax imposed by Section 4999 of the Code, then the Aggregate Payments shall be reduced to the extent necessary so that no portion of the Aggregate Payments would be subject to the excise tax. In such event, the Aggregate Payments shall be reduced in the following order: (1) cash payments not subject to Section 409A of the Code; (2) cash payments subject to Section 409A of the Code; (3) equity-based payments and acceleration; and (4) non-cash forms of benefits. To the extent any payment is to be made over time (e.g., in installments, etc.), then the payments shall be reduced in reverse chronological order.

(ii) The determination of the reduction provided in Section 5(b)(i) shall be made by a nationally recognized accounting firm selected by the Company (the "Accounting Firm"), which shall provide detailed supporting calculations both to the Company and the Executive within 15 business days of the Date of Termination, if applicable, or at such earlier time as is reasonably requested by the Company or the Executive. Any determination by the Accounting Firm shall be binding upon the Company and the Executive.

(c) Definitions. For purposes of this Section 5, the following terms shall have the following meanings:

"Change in Control" shall mean any of the following:

(i) any "person," as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "Act") (other than the Company, any of its subsidiaries, or any trustee, fiduciary or other person or entity holding securities under any employee benefit plan or trust of the Company or any of its subsidiaries), together with all "affiliates" and "associates" (as such terms are defined in Rule 12b-2 under the Act) of such person, shall become the "beneficial owner" (as such term is defined in Rule 13d-3 under the Act), directly or indirectly, of securities of the Company representing 50 percent or more of the combined voting power of the Company's then outstanding securities having the right to vote in an election of the Board ("Voting Securities") (in such case other than as a result of an acquisition of securities directly from the Company); or

(ii) the date a majority of the members of the Board is replaced during any 12-month period by directors whose appointment or election is not endorsed by a majority of the members of the Board before the date of the appointment or election; or

(iii) the consummation of (A) any consolidation or merger of the Company where the stockholders of the Company, immediately prior to the consolidation or merger, would not, immediately after the consolidation or merger, beneficially own (as such term is defined in Rule 13d-3 under the Act), directly or indirectly, shares representing in the aggregate more than 50 percent of the voting shares of the Company issuing cash or securities in the consolidation or merger (or of its ultimate parent corporation, if any), or (B) any sale or other transfer (in one transaction or a series of transactions contemplated or arranged by any party as a single plan) of all or substantially all of the assets of the Company.

Notwithstanding the foregoing, a "Change in Control" shall not be deemed to have occurred for purposes of the foregoing clause (i) solely as the result of an acquisition of securities by the Company which, by reducing the number of shares of Voting Securities outstanding, increases the proportionate number of Voting Securities beneficially owned by any person to 50 percent or more of the combined voting power of all of the then outstanding Voting Securities; provided, however, that if any person referred to in this sentence shall thereafter become the beneficial owner of any additional shares of Voting Securities (other than pursuant to a stock split, stock dividend, or similar transaction or as a result of an acquisition of securities directly from the Company) and immediately thereafter beneficially owns 50 percent or more of the combined voting power of all of the then outstanding Voting Securities, then a "Change in Control" shall be deemed to have occurred for purposes of the foregoing clause (i).

6. Section 409A.

(a) Anything in this Agreement to the contrary notwithstanding, if at the time of the Executive's separation from service within the meaning of Section 409A of the Code, the Company determines that the Executive is a "specified employee" within the meaning of Section 409A(a)(2)(B)(i) of the Code, then to the extent any payment or benefit that the Executive becomes entitled to under this Agreement or otherwise on account of the Executive's separation from service would be considered deferred compensation otherwise subject to the 20 percent additional tax imposed pursuant to Section 409A(a) of the Code as a result of the application of Section 409A(a)(2)(B)(i) of the Code, such payment shall not be payable and such benefit shall not be provided until the date that is the earlier of (A) six (6) months and one (1) day after the Executive's separation from service, or (B) the Executive's death. If any such delayed cash payment is otherwise payable on an installment basis, the first payment shall include a catch-up payment covering amounts that would otherwise have been paid during the six-month period but for the application of this provision, and the balance of the installments shall be payable in accordance with their original schedule.

(b) All in-kind benefits provided and expenses eligible for reimbursement under this Agreement shall be provided by the Company or incurred by the Executive during the time periods set forth in this Agreement. All reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred. The amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year (except for any lifetime or other aggregate limitation applicable to medical expenses). Such right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit.

(c) To the extent that any payment or benefit described in this Agreement constitutes "non-qualified deferred compensation" under Section 409A of the Code, and to the extent that such payment or benefit is payable upon the Executive's termination of employment, then such payments or benefits shall be payable only upon the Executive's "separation from service." The determination of whether and when a separation from service has occurred shall be made in accordance with the presumptions set forth in Treasury Regulation Section 1.409A-1(h).

(d) The parties intend that this Agreement will be administered in accordance with Section 409A of the Code. To the extent that any provision of this Agreement is ambiguous as to its compliance with Section 409A of the Code, the provision shall be read in such a manner so that all payments hereunder comply with Section 409A of the Code. Each payment pursuant to this Agreement or the Restrictive Covenants Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2). The parties agree that this Agreement may be amended, as reasonably requested by either party, and as may be necessary to fully comply with Section 409A of the Code and all related rules and regulations in order to preserve the payments and benefits provided hereunder without additional cost to either party.

(e) The Company makes no representation or warranty and shall have no liability to the Executive or any other person if any provisions of this Agreement are determined to constitute deferred compensation subject to Section 409A of the Code but do not satisfy an exemption from, or the conditions of, such Section.

7. Continuing Obligations.

(a) Restrictive Covenants Agreement. As a condition of employment, the Executive will be required to enter into the Employee Confidentiality, Assignment and Noncompetition Agreement, attached hereto as Exhibit A (the "Restrictive Covenants Agreement"). The Executive further acknowledges and agrees that he received the Restrictive Covenants Agreement with this Agreement and at least ten (10) business days before the Effective Date of this Agreement. For purposes of this Agreement, the obligations in this Section 7 and those that arise in the Restrictive Covenants Agreement and any other agreement relating to confidentiality, assignment of inventions, or other restrictive covenants shall collectively be referred to as the "Continuing Obligations."

(b) Third-Party Agreements and Rights. The Executive hereby confirms that the Executive is not bound by the terms of any agreement with any previous employer or other party which restricts in any way the Executive's use or disclosure of information or the Executive's engagement in any business. The Executive represents to the Company that the Executive's execution of this Agreement, the Executive's employment with the Company and the performance of the Executive's proposed duties for the Company will not violate any obligations the Executive may have to any such previous employer or other party. In the Executive's work for the Company, the Executive will not disclose or make use of any information in violation of any agreements with or rights of any such previous employer or other party, and the Executive will not bring to the premises of the Company any copies or other tangible embodiments of non-public information belonging to or obtained from any such previous employment or other party.

(c) Litigation and Regulatory Cooperation. During and after the Executive's employment, the Executive shall cooperate fully with the Company in the defense or prosecution of any claims or actions now in existence or which may be brought in the future against or on behalf of the Company which relate to events or occurrences that transpired while the Executive was employed by the Company. The Executive's full cooperation in connection with such claims or actions shall include, but not be limited to, being available to meet with counsel to prepare for discovery or trial and to act as a witness on behalf of the Company at mutually convenient times. During and after the Executive's employment, the Executive also shall cooperate fully with the Company in connection with any investigation or review of any federal, state or local regulatory authority as any such investigation or review relates to events or occurrences that transpired while the Executive was employed by the Company. The Company shall reimburse the Executive for any reasonable out-of-pocket expenses incurred in connection with the Executive's performance of obligations pursuant to this Section 7(c).

(d) Injunction. The Executive agrees that it would be difficult to measure any damages caused to the Company which might result from any breach by the Executive of any of his Continuing Obligations, and that in any event money damages would be an inadequate remedy for any such breach. Accordingly, subject to Section 8 of this Agreement, the Executive agrees that if the Executive breaches, or proposes to breach, any portion of his Continuing Obligations, the Company shall be entitled, in addition to all other remedies that it may have, to an injunction or other appropriate equitable relief to restrain any such breach without showing or proving any actual damage to the Company.

8. Arbitration of Disputes. Any controversy or claim arising out of or relating to this Agreement or the breach thereof or otherwise arising out of the Executive's employment or the termination of that employment (including, without limitation, any claims of unlawful employment discrimination whether based on age or otherwise) shall, to the fullest extent permitted by law, be settled by arbitration in any forum and form agreed upon by the parties or, in the absence of such an agreement, under the auspices of the American Arbitration Association ("AAA") in Boston, Massachusetts in accordance with the Employment Dispute Resolution Rules of the AAA, including, but not limited to, the rules and procedures applicable to the selection of arbitrators. In the event that any person or entity other than the Executive or the Company may be a party with regard to any such controversy or claim, such controversy or claim shall be submitted to arbitration subject to such other person or entity's agreement. Judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. This Section 8 shall be specifically enforceable. Notwithstanding the foregoing, this Section 8 shall not preclude either party from pursuing a court action for the sole purpose of obtaining a temporary restraining order or a preliminary injunction in circumstances in which such relief is appropriate; provided that any other relief shall be pursued through an arbitration proceeding pursuant to this Section 8.

9. Consent to Jurisdiction. To the extent that any court action is permitted consistent with or to enforce Section 8 of this Agreement, the parties hereby consent to the jurisdiction of the Superior Court of the Commonwealth of Massachusetts and the United States District Court for the District of Massachusetts. Accordingly, with respect to any such court action, the Executive (a) submits to the personal jurisdiction of such courts; (b) consents to service of process; and (c) waives any other requirement (whether imposed by statute, rule of court, or otherwise) with respect to personal jurisdiction or service of process.

10. Integration. This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements between the parties concerning such subject matter.

11. Withholding. All payments made by the Company to the Executive under this Agreement shall be net of any tax or other amounts required to be withheld by the Company under applicable law.

12. Successor to the Executive. This Agreement shall inure to the benefit of and be enforceable by the Executive's personal representatives, executors, administrators, heirs, distributees, devisees and legatees. In the event of the Executive's death after his termination of employment but prior to the completion by the Company of all payments due his under this Agreement, the Company shall continue such payments to the Executive's beneficiary designated in writing to the Company prior to his death (or to his estate, if the Executive fails to make such designation).

13. Enforceability. If any portion or provision of this Agreement (including, without limitation, any portion or provision of any section of this Agreement) shall to any extent be declared illegal or unenforceable by a court of competent jurisdiction, then the remainder of this Agreement, or the application of such portion or provision in circumstances other than those as to which it is so declared illegal or unenforceable, shall not be affected thereby, and each portion and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

14. Survival. The provisions of this Agreement shall survive the termination of this Agreement and/or the termination of the Executive's employment to the extent necessary to effectuate the terms contained herein.

15. Waiver. No waiver of any provision hereof shall be effective unless made in writing and signed by the waiving party. The failure of any party to require the performance of any term or obligation of this Agreement, or the waiver by any party of any breach of this Agreement, shall not prevent any subsequent enforcement of such term or obligation or be deemed a waiver of any subsequent breach.

16. Notices. Any notices, requests, demands and other communications provided for by this Agreement shall be sufficient if in writing and delivered in person or sent by a nationally recognized overnight courier service or by registered or certified mail, postage prepaid, return receipt requested, to the Executive at the last address the Executive has filed in writing with the Company or, in the case of the Company, at its main offices, attention of the Board.

17. Amendment. This Agreement may be amended or modified only by a written instrument signed by the Executive and by a duly authorized representative of the Company.

18. Governing Law. This is a Massachusetts contract and shall be construed under and be governed in all respects by the laws of the Commonwealth of Massachusetts, without giving effect to the conflict of laws principles of such Commonwealth. With respect to any disputes concerning federal law, such disputes shall be determined in accordance with the law as it would be interpreted and applied by the United States Court of Appeals for the First Circuit.

19. Counterparts. This Agreement may be executed in any number of counterparts, each of which when so executed and delivered shall be taken to be an original; but such counterparts shall together constitute one and the same document.

20. Successor to Company. The Company shall require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business or assets of the Company expressly to assume and agree to perform this Agreement to the same extent that the Company would be required to perform it if no succession had taken place. Failure of the Company to obtain an assumption of this Agreement at or prior to the effectiveness of any succession shall be a material breach of this Agreement.

21. Gender Neutral. Wherever used herein, a pronoun in the masculine gender shall be considered as including the feminine gender unless the context clearly indicates otherwise.

IN WITNESS WHEREOF, the parties have executed this Agreement effective on the date and year first above written.

UNUM THERAPEUTICS INC.

/s/ Chuck Wilson, PhD

Chuck Wilson, PhD
President & Chief Executive Officer

/s/ Matthew Osborne
Matthew Osborne

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: August 12, 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, Matthew Osborne, 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: August 12, 2019

By: /s/ Matthew Osborne
Matthew Osborne
Chief Financial Officer
(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 June 30, 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: August 12, 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 June 30, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Matthew Osborne, Chief Financial Officer 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: August 12, 2019

By: /s/ Matthew Osborne
Matthew Osborne
Chief Financial Officer
(Principal Financial Officer)