
**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 September 30, 2018

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: 001-37718

Spring Bank Pharmaceuticals, Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

52-2386345
(I.R.S. Employer
Identification No.)

35 Parkwood Drive, Suite 210
Hopkinton, MA
(Address of principal executive offices)

01748
(Zip Code)

Registrant's telephone number, including area code: (508) 473-5993

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	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
Emerging growth company	<input checked="" type="checkbox"/>		

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

As of October 25, 2018, the registrant had 16,433,768 shares of common stock, \$0.0001 par value per share, outstanding.

The registrant qualifies as a smaller reporting company. The aggregate market value of the registrant's common stock held by non-affiliates of the registrant based upon the closing price of common stock of \$11.85 per share as of June 29, 2018, the last trading day of the registrant's second fiscal quarter, was approximately \$128,839,682.

Spring Bank Pharmaceuticals, Inc.

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FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements that involve substantial risks and uncertainties. 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, projected costs, prospects, plans and objectives of management, are forward-looking statements. In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “design,” “expect,” “seek,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “believe,” “estimate,” “predict,” “potential” or “continue” or the negative of these terms or other similar expressions.

These forward-looking statements include, but are not limited to, statements about:

- our ongoing and planned preclinical studies and clinical trials;
- preclinical study data and clinical trial data and the timing of results of our ongoing clinical studies and/or trials;
- our plans to seek and enter into clinical trial collaborations and other broader collaborations; and
- our estimates regarding prospects, strategies, expenses, operating capital requirements, results of operations and needs for additional financing.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. Factors that could cause actual results or events to differ materially from the forward-looking statements that we make include, but are not limited to, the following:

- Our business currently depends substantially on the success of clinical trials for inarigivir soproxil, which we refer to as inarigivir, which is still under development. If we are unable to obtain regulatory approval for, or successfully commercialize, inarigivir, our business will be materially harmed.
- We are very early in our development efforts and our product candidates may not be successful in later stage clinical trials. Results obtained in our preclinical studies and clinical trials to date are not necessarily indicative of results to be obtained in future clinical trials. As a result, our product candidates may never be approved as marketable therapeutics.
- We will need additional funding to complete the development of our product candidates and before we can expect to become profitable from the sales of our products, if approved. If we are unable to raise capital when needed, we could be forced to delay, reduce or eliminate our product development programs or commercialization efforts.
- We rely, and expect to continue to rely, on third parties to conduct our clinical trials and to manufacture our product candidates for preclinical and clinical testing. These third parties may not perform satisfactorily, which could delay our product development activities.
- If we are unable to adequately protect our proprietary technology, or obtain and maintain issued patents which are sufficient to protect our product candidates, others could compete against us more directly, which would have a material adverse impact on our business, results of operations, financial condition and prospects.
- We may not be able to retain key executives or to attract, retain and motivate key personnel. If we are unable to retain such key personnel, it could have a material adverse impact on our business and prospects.

You should read this Quarterly Report on Form 10-Q and the documents that we have filed as exhibits to this Quarterly Report on Form 10-Q completely and with the understanding that our actual future results may be materially different from what we expect. You should also read carefully the factors described in the section “Risk Factors” of this Quarterly Report on Form 10-Q and “Item 1A. Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2017 to better understand the risks and uncertainties inherent in our business and underlying any forward-looking statements. You are advised, however, to consult any further disclosures we make on related subjects in our subsequent Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, press releases, and our website. Any forward-looking statements that we make in this Quarterly Report on Form 10-Q speak only as of the date of this Quarterly Report on Form 10-Q, and we undertake no obligation to update such statements to reflect events or circumstances after the date of this Quarterly Report on Form 10-Q or to reflect the occurrence of unanticipated events.

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

SPRING BANK PHARMACEUTICALS, INC.

CONSOLIDATED BALANCE SHEETS
(In Thousands, Except Share and Per Share Data)

	September 30, 2018	December 31, 2017
	(unaudited)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 23,637	\$ 23,649
Marketable securities	29,868	26,906
Prepaid expenses and other current assets	1,029	580
Total current assets	54,534	51,135
Marketable securities, long-term	17,827	—
Property and equipment, net	2,391	687
Restricted cash	234	484
Other assets	81	35
Total	<u>\$ 75,067</u>	<u>\$ 52,341</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 1,374	\$ 1,700
Accrued expenses and other current liabilities	3,740	2,734
Total current liabilities	5,114	4,434
Warrant liabilities	9,291	13,128
Other long-term liabilities	130	31
Total liabilities	14,535	17,593
Commitments and contingencies (Note 8)		
Stockholders' equity:		
Preferred stock, \$0.0001 par value—authorized, 10,000,000 shares at September 30, 2018 and December 31, 2017; no shares issued or outstanding at September 30, 2018 and December 31, 2017	—	—
Common stock, \$0.0001 par value—authorized, 200,000,000 shares at September 30, 2018 and December 31, 2017; 16,431,171 and 12,961,993 shares issued and outstanding at September 30, 2018 and December 31, 2017, respectively	2	1
Additional paid-in capital	157,209	113,984
Accumulated deficit	(96,643)	(79,214)
Other comprehensive loss	(36)	(23)
Total stockholders' equity	60,532	34,748
Total	<u>\$ 75,067</u>	<u>\$ 52,341</u>

See accompanying notes to consolidated financial statements.

SPRING BANK PHARMACEUTICALS, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(Unaudited)
(In Thousands, Except Share and Per Share Data)

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2018	2017	2018	2017
Operating expenses:				
Research and development	\$ 5,656	\$ 3,221	\$ 15,188	\$ 9,152
General and administrative	2,059	1,968	6,681	5,811
Total operating expenses	7,715	5,189	21,869	14,963
Loss from operations	(7,715)	(5,189)	(21,869)	(14,963)
Other income (expense):				
Interest income	271	141	603	220
Change in fair value of warrant liabilities	(1,336)	(5,780)	3,837	(11,474)
Net loss	(8,780)	(10,828)	(17,429)	(26,217)
Unrealized loss on marketable securities	(14)	(10)	(13)	(7)
Comprehensive loss	\$ (8,794)	\$ (10,838)	\$ (17,442)	\$ (26,224)
Net loss per common share:				
Basic	\$ (0.59)	\$ (0.85)	\$ (1.27)	\$ (2.48)
Diluted	\$ (0.59)	\$ (0.85)	\$ (1.39)	\$ (2.48)
Weighted-average number of shares outstanding:				
Basic	14,841,197	12,696,986	13,677,375	10,555,461
Diluted	14,841,197	12,696,986	15,311,152	10,555,461

See accompanying notes to consolidated financial statements.

SPRING BANK PHARMACEUTICALS, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)
(In Thousands)

	For the Nine Months Ended September 30,	
	2018	2017
Cash flows from operating activities:		
Net loss	\$ (17,429)	\$ (26,217)
Adjustments for:		
Depreciation and amortization	193	115
Loss on the disposal of property and equipment	16	—
Change in fair value of warrant liabilities	(3,837)	11,474
Non-cash investment income (expense)	361	(50)
Non-cash stock-based compensation	2,062	1,483
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(449)	(10)
Other assets	(46)	—
Accounts payable	(326)	254
Accrued expenses and other liabilities	1,098	311
Net cash used in operating activities	(18,357)	(12,640)
Cash flows from investing activities:		
Proceeds from sale of marketable securities	28,837	14,605
Purchases of marketable securities	(50,000)	(34,397)
Purchases of property and equipment	(1,916)	(127)
Proceeds from the sale of property and equipment	3	—
Net cash used in investing activities	(23,076)	(19,919)
Cash flows from financing activities:		
Proceeds from issuance of common stock in connection with at-the-market offering, net of issuance costs paid of \$140	3,212	—
Proceeds from the issuance of common stock, net of issuance costs paid of \$2,618 in 2018 and \$2,928 in 2017	37,959	39,572
Proceeds from exercise of stock options	—	92
Cash provided by financing activities	41,171	39,664
Net (decrease) increase in cash, cash equivalents and restricted cash	(262)	7,105
Cash, cash equivalents and restricted cash, beginning of period	24,133	10,684
Cash, cash equivalents and restricted cash, end of period	\$ 23,871	\$ 17,789
Supplemental disclosures of cash flow information:		
Cash paid for taxes	\$ 3	\$ 1
Cash paid for interest, net	\$ —	\$ —

See accompanying notes to consolidated financial statements.

1. NATURE OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Business

Spring Bank Pharmaceuticals, Inc. (the “Company”) is a clinical-stage biopharmaceutical company engaged in the discovery and development of a novel class of therapeutics using a proprietary small molecule nucleotide platform. The Company is developing its most advanced product candidate, inarigivir soproxil (“inarigivir”), for the treatment of chronic hepatitis B virus. Since inception in 2002 and prior to its initial public offering (“IPO”) in May 2016, the Company built its technology platform and product candidate pipeline, supported by grants and through private financings. In September 2015, the Company formed a wholly owned subsidiary, Sperovie Biosciences, Inc., and in December 2016, the Company formed a wholly owned subsidiary, SBP Securities Corporation.

The Company’s success is dependent upon its ability to successfully complete clinical development and obtain regulatory approval of its product candidates, successfully commercialize approved products, generate revenue, and, ultimately, attain profitable operations. The Company’s operations to date have been primarily limited to the development of inarigivir, SB 11285, SB 9225 and the Company’s other product candidates.

Basis of Presentation and Liquidity

The accompanying consolidated financial statements have been prepared in accordance with United States (“U.S.”) generally accepted accounting principles (“U.S. GAAP”).

The accompanying interim financial statements as of September 30, 2018 and for the three and nine months ended September 30, 2018 and 2017, and related interim information contained within the notes to the financial statements, are unaudited. In management’s opinion, the unaudited interim consolidated financial statements have been prepared on the same basis as the Company’s audited financial statements and include all adjustments (including normal recurring adjustments) necessary for the fair presentation of the Company’s financial position as of September 30, 2018, results of operations for the three and nine months ended September 30, 2018 and 2017, and its cash flows for the nine months ended September 30, 2018 and 2017. These interim financial statements should be read in conjunction with the Company’s audited financial statements and accompanying notes contained in the Company’s Annual Report on Form 10-K for the year ended December 31, 2017, as filed with the Securities and Exchange Commission (“SEC”) on February 20, 2018. The results for the three and nine months ended September 30, 2018 are not necessarily indicative of the results expected for the full fiscal year or any interim period.

As of September 30, 2018, the Company had an accumulated deficit of \$96.6 million and \$71.3 million in cash, cash equivalents and marketable securities.

The Company expects to continue to incur significant and increasing losses for the foreseeable future. The Company anticipates that its expenses will increase significantly as it continues to develop inarigivir, SB 11285, SB 9225 and its other product candidates. The Company does not have any committed external source of funds. As a result, the Company will need additional financing to support its continuing operations. Adequate additional funds may not be available to the Company on acceptable terms, or at all. To the extent that the Company raises additional capital through the sale of equity or convertible debt securities, stockholders’ ownership interests will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect common stockholder rights. If the Company raises additional funds through collaborations, strategic alliances or licensing arrangements with third parties, the Company may have to relinquish valuable rights to its technologies, future revenue streams, research programs, or product candidates or grant licenses on terms that may not be favorable to the Company.

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries, Sperovie Biosciences, Inc. and SBP Securities Corporation. Sperovie Biosciences, Inc. had operations consisting mainly of legal fees associated with intellectual property activities as of September 30, 2018. SBP Securities Corporation had assets primarily related to investments in marketable securities and operations consisting primarily of interest income as of September 30, 2018. All intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. The Company bases estimates and assumptions on historical experience when available and on various factors that it believes to be reasonable under the circumstances. Significant estimates relied upon in preparing the accompanying financial statements related to the fair value of common stock and warrant liabilities, accounting for stock-based compensation, income taxes, useful lives of long-lived assets, and accounting for certain accruals. The Company evaluates its estimates and assumptions on an ongoing basis. The Company's actual results may differ from these estimates.

Cash, Cash Equivalents

Cash equivalents are stated at fair value and include short-term, highly liquid investments with remaining maturities of 90 days or less at the date of purchase. Included in cash and cash equivalents as of September 30, 2018 are money market fund investments of \$22.1 million. As of December 31, 2017, included in cash and cash equivalents are money market fund investments of \$21.3 million, which are reported at fair value (Note 5).

Restricted Cash

As of September 30, 2018, restricted cash consists of approximately \$234,000, which is held as a security deposit required in conjunction with a lease agreement entered into in October 2017. As of December 31, 2017, restricted cash consisted of approximately \$484,000, of which \$250,000 is held as collateral for the Company's credit card program and \$234,000 is held as a security deposit required in conjunction with a lease agreement entered into in October 2017.

Concentration of Credit Risk

Financial instruments that subject the Company to significant concentrations of credit risk consist primarily of cash, cash equivalents, restricted cash and marketable securities. Substantially all of the Company's cash is held at financial institutions that management believes to be of high credit quality. Deposits with these financial institutions may exceed the amount of insurance provided on such deposits; however, these deposits may be redeemed upon demand and, therefore, bear minimal risk.

Investments in Marketable Securities

The Company invests excess cash balances in short-term and long-term marketable securities. The Company classifies investments in marketable securities as either held-to-maturity or available-for-sale based on facts and circumstances present at the time of purchase. At each balance sheet date presented, all investments in securities are classified as available-for-sale. The Company reports available-for-sale investments at fair value at each balance sheet date and includes any unrealized holding gains and losses (the adjustment to fair value) in accumulated other comprehensive income (loss), a component of stockholders' equity. Realized gains and losses are determined using the specific identification method and are included in other income (expense). If any adjustment to fair value reflects a decline in the value of the investment, the Company considers all available evidence to evaluate the extent to which the decline is "other than temporary," including the intention to sell and, if so, marks the investment to market through a charge to the Company's consolidated statements of operations and comprehensive loss.

Property and Equipment, Net

Property and equipment are recorded at cost. Costs associated with maintenance and repairs are expensed as incurred. Depreciation is provided using the straight-line method over the estimated useful lives:

<u>Asset Category</u>	<u>Useful Life</u>
Equipment	5-7 years
Furniture and fixtures	5 years
Leasehold improvements	Lesser of 10 years or the remaining term of the respective lease

Impairment of Long-Lived Assets

Long-lived assets to be held and used are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. When such events occur, the Company compares the carrying amounts of the

assets to their undiscounted expected future cash flows. If the undiscounted cash flows are insufficient to recover the carrying value, an impairment loss is recorded for the difference between the carrying value and fair value of the asset. Through September 30, 2018, no such impairment has occurred.

Deferred Rent

The Company's operating leases include rent escalation payment terms and other incentives received from landlords. Deferred rent represents the difference between actual operating lease payments due and straight-line rent expense over the term of the lease, which is recorded in accrued expenses and other current liabilities. The Company had deferred aggregate rent for its office and laboratory space located in Hopkinton, Massachusetts of \$141,000 as of September 30, 2018. The Company had deferred aggregate rent for its previously leased research and development facility in Milford, Massachusetts and its former headquarters in Hopkinton, Massachusetts of \$35,000 as of December 31, 2017. As of September 30, 2018, the Company had no deferred rent for its previously leased research and development facility in Milford, Massachusetts and its former headquarters in Hopkinton, Massachusetts.

Research and Development Costs

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

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

The Company expenses research and development costs as incurred. The Company recognizes external development costs based on an evaluation of the progress to completion of specific tasks using information provided to the Company by its vendors and its clinical investigative sites. Payments for these activities are based on the terms of the individual agreements, which may differ from the pattern of costs incurred, and are reflected in the Company's consolidated financial statements as prepaid or accrued research and development expenses.

Warrants

The Company reviews the terms of all warrants issued and classifies the warrants as a component of permanent equity if they are freestanding financial instruments that are legally detachable and separately exercisable, contingently exercisable, do not embody an obligation for the Company to repurchase its own shares, and permit the holders to receive a fixed number of shares of common stock upon exercise. In addition, the warrants must require physical settlement and may not provide any guarantee of value or return. Warrants that meet these criteria are initially recorded at their grant date fair value and are not subsequently remeasured. Warrants that do not meet this criteria are classified as liabilities and remeasured to their fair value at each reporting period.

Stock-Based Compensation

The Company accounts for all stock-based payment awards granted to employees and nonemployees using a fair value method. The Company's stock-based payments include stock options and grants of common stock, including common stock subject to vesting. The measurement date for employee awards is the date of grant, and stock-based compensation costs are recognized as expense over the employees' requisite service period, which is generally the vesting period, on a straight-line basis. The Company adopted ASU 2018-07, *Improvements to Nonemployee Share-Based Payment Accounting*, effective July 1, 2018, which aligns the accounting treatment of nonemployee awards with employee awards. Stock-based compensation expense is classified in the accompanying consolidated statements of operations and comprehensive loss based on the department to which the related services are provided.

Financial Instruments

The Company's financial instruments consist of cash equivalents, marketable securities, accounts payable and liability classified warrants. The carrying amounts of cash and cash equivalents and accounts payable approximate their fair value due to the short-term nature of those financial instruments. The fair value of the marketable securities and liability classified warrants are remeasured to fair value each reporting period as described in Note 5.

Fair Value Measurements

The Company is required to disclose information on all assets and liabilities reported at fair value that enables an assessment of the inputs used in determining the reported fair values. Accounting Standards Codification ("ASC") 820, *Fair Value Measurements and Disclosures* ("ASC 820"), establishes a hierarchy of inputs used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability and are developed based on the best information available in the circumstances. The fair value hierarchy applies only to the valuation inputs used in determining the reported fair value of the investments and is not a measure of the investment credit quality. The three levels of the fair value hierarchy are described below:

Level 1—Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date.

Level 2—Valuations based on quoted prices for similar assets or liabilities in markets that are not active or for which all significant inputs are observable, either directly or indirectly.

Level 3—Valuations that require inputs that reflect the Company's own assumptions that are both significant to the fair value measurement and unobservable.

To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. The Company's assets and liabilities measured at fair value on a recurring basis include cash equivalents, marketable securities and warrant liabilities.

Net Loss Per Share

Basic net loss per share is computed by dividing the net loss by the weighted-average number of shares of common stock outstanding for the period. Diluted net loss per share is computed by dividing the net loss by the weighted-average number of shares of common stock and dilutive common stock equivalents outstanding for the period, determined using the treasury-stock method and the as if-converted method, for convertible securities, if inclusion of these instruments is dilutive. For the three months ended September 30, 2018, both methods are equivalent. For the nine months ended September 30, 2018, diluted net loss per share amounts were calculated based on the dilutive effect of the total number of shares of common stock related to the November 2016 Private Placement warrants and the change in the fair value of the warrant liability. For the three and nine months ended September 30, 2017, both methods are equivalent. Basic and diluted net loss per share is described further in Note 2.

Income Taxes

Deferred tax assets and liabilities are determined based upon the differences between the financial statement carrying amounts and the tax basis of existing assets and liabilities and for loss and credit carryforwards using enacted tax rates expected to be in effect in the years in which the differences are expected to reverse. Deferred tax assets are reduced by a valuation allowance if it is more likely than not that some portion or all of the deferred tax asset will not be realized.

The Company assesses its income tax positions and records tax benefits based upon management's evaluation of the facts, circumstances and information available at the reporting date. For those tax positions where it is more likely than not that a tax benefit will be sustained, the Company records the largest amount of tax benefit with a greater than 50% likelihood of being realized upon ultimate settlement with a taxing authority having full knowledge of all relevant information. For those income tax positions where it is not more likely than not that a tax benefit will be sustained, no tax benefit is recognized in the consolidated financial statements. The Company classifies interest and penalties associated with such uncertain tax positions as a component of interest expense. As of September 30, 2018 and December 31, 2017, the Company has not identified any material uncertain tax positions.

Guarantees and Indemnifications

As permitted under Delaware law, the Company indemnifies its officers and directors for certain events or occurrences while the officer or director is, or was, serving at the Company's request in such capacity.

The Company leases office and laboratory space in Hopkinton, Massachusetts and previously leased research and development space in Milford, Massachusetts under non-cancelable operating leases. The Company has standard indemnification arrangements under these leases that require it to indemnify the landlords against liability for injury, loss, accident, or damage from any claims, actions, proceedings, or costs resulting from certain acts, breaches, violations, or nonperformance under the Company's lease.

Through September 30, 2018, the Company had not experienced any losses related to these indemnification obligations and no material claims were outstanding. The Company does not expect significant claims related to these indemnification obligations, and consequently, concluded that the fair value of these obligations is negligible, and no related reserves were established.

Segment Information

Operating segments are identified as components of an enterprise about which separate and discrete financial information is available for evaluation by the chief operating decision maker, the Company's chief executive officer, in making decisions regarding resource allocation and assessing performance. The Company views its operations and manages its business in one operating segment and does not track expenses on a program-by-program basis.

Recently Issued Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board, or FASB, issued ASU 2014-09, *Revenue from Contracts with Customers* (Topic 606), which clarifies the principles for recognizing revenue and develops a common revenue standard for U.S. GAAP and International Financial Reporting Standards, or IFRS. This standard removes inconsistencies and limitations between U.S. GAAP and IFRS in revenue requirements, provides a more robust framework for addressing revenue issues, improves comparability of revenue recognition practices across entities, industries, jurisdictions, and capital markets, provides more useful information to users of financial statements through improved disclosure requirements, and simplifies the preparation of financial statements by reducing the number of requirements to which an entity must refer. Entities can transition to the standard either retrospectively or as a cumulative-effect adjustment as of the date of adoption. This update is effective for annual periods beginning after December 15, 2017, including interim periods within that reporting period and early application is not permitted. The Company adopted this standard as of January 1, 2018; however, until the Company expects material revenue to be recognized, the adoption of this standard is not expected to have an impact on the Company's consolidated financial statements.

In January 2016, the FASB issued ASU 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*, which amends ASC Subtopic 825-10, *Financial Instruments - Overall*, and includes updates on certain aspects of recognition, measurement, presentation and disclosure of financial instruments and applies to all entities that hold financial assets or owe financial liabilities. The new standard is effective for the Company for the annual period beginning after December 15, 2017, with early adoption permitted. The Company adopted this standard as of January 1, 2018; however, the adoption of this standard did not impact the Company's consolidated financial statements.

In September 2016, the FASB issued ASU 2016-15, *Classification of Certain Cash Receipts and Cash Payments*, which amends ASC Topic 230, *Statement of Cash Flows*, and includes provisions intended to reduce diversity in practice and provides guidance on eight specific statements of cash flows classification issues. The new standard is effective for the Company for the annual period ending after December 15, 2017, and for annual and interim periods thereafter, with early adoption permitted. The Company adopted this standard as of January 1, 2018; however, the adoption of this standard did not impact the Company's consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases* (Topic 842), which supersedes the current leasing guidance and upon adoption, will require lessees to recognize right-of-use assets and lease liabilities on the balance sheet for all leases with terms longer than twelve months. Based on certain criteria, leases will be classified as either financing or operating, with classification affecting the pattern of expense recognition in the income statement. For leases with a term of twelve months or less, a lessee is permitted to make an accounting policy election by class of underlying assets not to recognize lease assets and lease liabilities. If a lessee makes this election, it should recognize lease expense for such leases generally on a straight-line basis over the lease term. The new standard is effective for the Company for the annual period beginning after December 15, 2018 and early adoption is permitted. The Company is currently evaluating the impact that the adoption of this standard may have on its consolidated financial statements.

In July 2017, the FASB issued ASU 2017-11, *Earnings Per Share (Topic 260), Distinguishing Liabilities from Equity (Topic 480), Derivatives and Hedging (Topic 815): I. Accounting for Certain Financial Instruments with Down Round Features and II. Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interests with a Scope Exception*. Part I applies to entities that issue financial instruments such as warrants, convertible debt or convertible preferred stock that contain down round features. Part II simply replaces the indefinite deferral for certain mandatorily redeemable noncontrolling interests and mandatorily redeemable financial instruments of nonpublic entities contained within Accounting Standards Codification (ASC) Topic 480 with a scope exception and does not impact the accounting for these mandatorily redeemable instruments. This ASU is effective for public companies for the annual reporting periods beginning after December 15, 2018, and interim periods within those annual periods. Early adoption is permitted. The Company is currently evaluating the impact that the adoption of this standard may have on its consolidated financial statements.

In June 2018, the FASB issued ASU 2018-07, *Improvements to Nonemployee Share-Based Payment Accounting*, which amends ASC Topic 718, *Compensation – Stock Compensation*, and includes provisions intended to provide simplification of several aspects of accounting for nonemployee share-based payment transactions. The new standard is effective for the Company for the annual period beginning after December 15, 2018, including interim periods within that fiscal year. Early adoption is permitted, but no earlier than the Company's adoption date of Topic 606. The Company elected early adoption of this standard as of July 1, 2018. The adoption of this standard has resulted in a de minimis impact on the Company's consolidated financial statements.

2. NET LOSS PER SHARE

The following table summarizes the computation of basic and diluted net loss per share of the Company for such periods (in thousands, except share and per share data):

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2018	2017	2018	2017
Net loss	\$ (8,780)	\$ (10,828)	\$ (17,429)	\$ (26,217)
Less: decrease in change in fair value of warrant liabilities	—	—	(3,837)	—
Net loss available to common shareholders	\$ (8,780)	\$ (10,828)	\$ (21,266)	\$ (26,217)
Weighted-average number of shares outstanding:				
Basic	14,841,197	12,696,986	13,677,375	10,555,461
Effect of dilutive securities:				
Common stock warrants	—	—	1,633,777	—
Dilutive potential common shares	14,841,197	12,696,986	15,311,152	10,555,461
Net loss per common share:				
Basic	\$ (0.59)	\$ (0.85)	\$ (1.27)	\$ (2.48)
Diluted	\$ (0.59)	\$ (0.85)	\$ (1.39)	\$ (2.48)

For the three months ended September 30, 2018, the diluted net loss per common share is the same as basic net loss per common share. For the nine months ended September 30, 2018, the diluted net loss per common share amounts were calculated based on the dilutive effect of the total number of shares of common stock related to the November 2016 Private Placement warrants of 1,633,777 shares and the change in the fair value of the warrant liability of \$3.8 million. For the three and nine months ended September 30, 2017, the diluted net loss per common share is the same as basic net loss per common share.

The following potentially dilutive securities outstanding, prior to the use of the treasury stock method or if-converted method, have been excluded from the computation of diluted weighted-average shares outstanding, because such securities had an antidilutive impact due to the losses reported:

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2018	2017	2018	2017
Common stock warrants	1,662,124	1,798,084	28,347	1,798,084
Stock options	1,349,565	977,565	1,349,565	977,565

3. INVESTMENTS

Cash in excess of the Company's immediate requirements is invested in accordance with the Company's investment policy that primarily seeks to maintain adequate liquidity and preserve capital.

The following table summarizes the Company's investments, by category, as of September 30, 2018 and December 31, 2017 (in thousands):

	September 30, 2018	December 31, 2017
Investments - Current:		
Debt securities - available for sale	\$ 29,868	\$ 26,906
Total	<u>\$ 29,868</u>	<u>\$ 26,906</u>
Investments - Noncurrent:		
Debt securities - available for sale	\$ 17,827	\$ —
Total	<u>\$ 17,827</u>	<u>\$ —</u>

A summary of the Company's available-for-sale classified investments as of September 30, 2018 and December 31, 2017 consisted of the following (in thousands):

	At September 30, 2018			
	Cost Basis	Unrealized Gains	Unrealized Losses	Fair Value
Investments - Current:				
Corporate bonds	\$ 9,998	\$ —	\$ (10)	\$ 9,988
United States treasury securities	19,896	—	(16)	19,880
Total	<u>\$ 29,894</u>	<u>\$ —</u>	<u>\$ (26)</u>	<u>\$ 29,868</u>
Investments - Noncurrent:				
Corporate bonds	\$ 6,028	\$ —	\$ (3)	\$ 6,025
United States treasury securities	11,809	—	(7)	11,802
Total	<u>\$ 17,837</u>	<u>\$ —</u>	<u>\$ (10)</u>	<u>\$ 17,827</u>

	At December 31, 2017			
	Cost Basis	Unrealized Gains	Unrealized Losses	Fair Value
Investments - Current:				
Commercial paper	\$ 9,584	\$ —	\$ —	\$ 9,584
Corporate bonds	15,347	—	(23)	15,324
United States treasury securities	1,998	—	—	1,998
Total	<u>\$ 26,929</u>	<u>\$ —</u>	<u>\$ (23)</u>	<u>\$ 26,906</u>

The amortized cost and fair value of the Company's available-for-sale investments, by contract maturity, as of September 30, 2018 consisted of the following (in thousands):

	Amortized Cost	Fair Value
Due in one year or less	\$ 29,894	\$ 29,868
Due after one year through two years	17,837	17,827
Total	<u>\$ 47,731</u>	<u>\$ 47,695</u>

4. PROPERTY AND EQUIPMENT, NET

Property and equipment as of September 30, 2018 and December 31, 2017 consisted of the following (in thousands):

	September 30, 2018	December 31, 2017
Equipment	\$ 1,154	\$ 727
Furniture and fixtures	384	292
Leasehold improvements	1,356	153
Total property and equipment	2,894	1,172
Less: accumulated depreciation and amortization	(503)	(485)
Property and equipment, net	<u>\$ 2,391</u>	<u>\$ 687</u>

Depreciation expense for the three and nine months ended September 30, 2018 was \$107,000 and \$193,000, respectively. Depreciation expense for the three and nine months ended September 30, 2017 was \$39,000 and \$115,000, respectively.

5. FAIR VALUE MEASUREMENTS

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 are performed in a manner to maximize the use of observable inputs and minimize the use of unobservable inputs.

The Company classified its money market funds and United States treasury securities within Level 1 because their fair values are based on their quoted market prices. The Company classified its commercial paper and corporate bonds within Level 2 because their fair values are determined using alternative pricing sources or models that utilized market observable inputs.

A summary of the assets and liabilities that are measured at fair value as of September 30, 2018 and December 31, 2017 is as follows (in thousands):

	Carrying Value	Fair Value Measurement at September 30, 2018		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Money market funds (1)	\$ 22,074	\$ 22,074	\$ —	\$ —
Fixed income securities	47,695	31,682	16,013	—
Total	<u>\$ 69,769</u>	<u>\$ 53,756</u>	<u>\$ 16,013</u>	<u>\$ —</u>
Liabilities:				
Warrant liabilities	\$ 9,291	\$ —	\$ —	\$ 9,291
Total	<u>\$ 9,291</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 9,291</u>

	Carrying Value	Fair Value Measurement at December 31, 2017		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Money market funds (1)	\$ 21,265	\$ 21,265	\$ —	\$ —
Fixed income securities	26,906	—	26,906	—
Total	<u>\$ 48,171</u>	<u>\$ 21,265</u>	<u>\$ 26,906</u>	<u>\$ —</u>
Liabilities:				
Warrant liabilities	\$ 13,128	\$ —	\$ —	\$ 13,128
Total	<u>\$ 13,128</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 13,128</u>

(1) Money market funds are included within cash and cash equivalents in the accompanying consolidated balance sheets and are recognized at fair value.

The following table reflects the change in the Company's Level 3 liabilities, which consists of the warrants issued in a private placement in November 2016 (see Note 7), for the period ended September 30, 2018 (in thousands):

	November Private Placement Warrants
Balance at December 31, 2016	\$ 6,333
Change in fair value	6,795
Balance at December 31, 2017	13,128
Change in fair value	(3,837)
Balance at September 30, 2018	\$ 9,291

6. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

Accrued expenses as of September 30, 2018 and December 31, 2017 consisted of the following (in thousands):

	September 30, 2018	December 31, 2017
Clinical	\$ 1,852	\$ 1,093
Compensation and benefits	928	1,024
Accounting and legal	262	453
Other	698	164
Total accrued expenses and other current liabilities	\$ 3,740	\$ 2,734

7. STOCKHOLDERS' EQUITY

Common and Preferred Stock

In June 2017, the Company issued and sold in an underwritten public offering an aggregate of 3,269,219 shares of its common stock at \$13.00 per share, which included 384,604 shares pursuant to the exercise of an option to purchase additional shares granted to the underwriters in connection with the offering. The offering resulted in \$39.6 million of net proceeds to the Company, after deducting underwriting discounts and commissions and other offering expenses payable by the Company.

In August 2017, the Company entered into a Controlled Equity OfferingSM Sales Agreement (the "Sales Agreement") with Cantor Fitzgerald & Co. ("Cantor"), pursuant to which the Company may offer and sell, from time to time through Cantor, shares of the Company's common stock having an aggregate offering price of up to \$50.0 million. The Company will pay Cantor a commission rate equal to 3.0% of the aggregate gross proceeds from each sale. During the three months ended September 30, 2018, the Company did not sell any shares under the Sales Agreement. During the nine months ended September 30, 2018, the Company sold an aggregate of 217,329 shares of its common stock pursuant to the Sales Agreement at a weighted-average selling price of \$15.42 per share, which resulted in \$3.2 million of net proceeds to the Company. During the year ended December 31, 2017, the Company sold an aggregate of 252,443 shares of its common stock pursuant to the Sales Agreement at a weighted-average selling price of \$15.55 per share, which resulted in \$3.7 million of net proceeds to the Company.

In August 2018, the Company issued and sold in an underwritten public offering an aggregate of 3,246,079 shares of our common stock at \$12.50 per share, which included 246,079 shares pursuant to the exercise of an option to purchase additional shares granted to the underwriters in connection with the offering. The offering resulted in \$38.0 million of net proceeds, after deducting underwriting discounts and commissions and other offering expenses payable by the Company.

Warrants

In connection with the amendment and restatement of a license agreement with BioHEP in February 2016, the Company issued a warrant to purchase 125,000 shares of the Company's common stock to BioHEP (the "BioHEP Warrant"). The BioHEP Warrant had an exercise price of \$16.00 per share and expired unexercised on August 1, 2018. The Company evaluated the terms of the warrant and concluded that it should be equity-classified. The fair value of the warrant, \$0.8 million, was estimated on the issuance date using a Black-Scholes pricing model based on the following assumptions: an expected term of two and a half years, expected stock price volatility of 71%, a risk-free rate of 1.01%, and a dividend yield of 0%. The fair value was expensed as research and development costs.

In connection with the Company's IPO, the Company issued to the sole book-running manager for the IPO a warrant to purchase 27,600 shares of common stock in May 2016 and a warrant to purchase 747 shares of common stock in June 2016 (together, the "IPO Warrants"). The IPO Warrants are exercisable at an exercise price of \$15.00 per share and expire on May 5, 2021. The Company

evaluated the terms of the IPO Warrants and concluded that they should be equity-classified. The fair value of the May 2016 IPO Warrants was estimated on the applicable issuance dates using a Black-Scholes pricing model based on the following assumptions: an expected term of 4.99 years; expected stock price volatility of 87%; a risk-free rate of 1.20%; and a dividend yield of 0%. The fair value of the June 2016 IPO Warrants was estimated on the applicable issuance dates using a Black-Scholes pricing model based on the following assumptions: an expected term of 4.92 years; expected stock price volatility of 87%; a risk-free rate of 1.23%; and a dividend yield of 0%. The aggregate fair value of the IPO Warrants was approximately \$218,000.

The Company received approximately \$5.3 million in proceeds upon the exercise of warrants to purchase 641,743 shares of its common stock, which were exercised in connection with the closing of the IPO. Upon the closing of the Company's IPO, all of the outstanding and unexercised warrants, except the BioHEP warrant and the IPO Warrants, terminated in accordance with their original terms.

In November 2016, the Company entered into a definitive agreement with respect to the private placement of 1,644,737 shares of common stock and warrants to purchase 1,644,737 shares of common stock (the "November 2016 Private Placement Warrants") to a group of accredited investors. These investors paid \$9.12 for each share of common stock and warrant to purchase one share of common stock. The November 2016 Private Placement Warrants are exercisable at an exercise price of \$10.79 per share and expire on November 23, 2021. The Company evaluated the terms of these warrants and concluded that they are liability-classified. In November 2016, the Company recorded the fair value of these warrants of approximately \$8.3 million using a Black-Scholes pricing model. The Company must recognize any change in the value of the warrant liability each reporting period in the statement of operations. As of September 30, 2018 and December 31, 2017, the fair value of the November 2016 Private Placement Warrants was approximately \$9.3 million and \$13.1 million, respectively (see Note 5).

A summary of the Black-Scholes pricing model assumptions used to record the fair value of the warrants is as follows:

	September 30, 2018	December 31, 2017
Risk-free interest rate	2.9%	2.0%
Expected term (in years)	3.1	3.9
Expected volatility	61.3%	73.1%
Expected dividend yield	0%	0%

The following table summarizes the warrant activity for the year ended December 31, 2017 and for the nine months ended September 30, 2018:

	Warrants
Outstanding at December 31, 2016	1,798,084
Grants	—
Exercises	(10,960)
Expirations/cancellations	—
Outstanding at December 31, 2017	1,787,124
Grants	—
Exercises	—
Expirations/cancellations	(125,000)
Outstanding at September 30, 2018	1,662,124

2014 Stock Incentive Plan

In April 2014, the Company's Board of Directors approved the 2014 Stock Incentive Plan (the "2014 Plan") and authorized 750,000 shares of common stock to be issued under the 2014 Plan. The Company's 2014 Plan provides for the issuance of common stock, stock options and other stock-based awards to employees, officers, directors, consultants, and advisors. The Company's 2015 Stock Incentive Plan (the "2015 Plan") became effective immediately prior to the closing of the Company's IPO on May 11, 2016. Upon the effectiveness of the 2015 Plan, 116,863 shares of common stock that remained available for grant under the 2014 Plan became available for grant under the 2015 Plan, and no further awards were available to be issued under the 2014 Plan.

2015 Stock Incentive Plan and Amended and Restated 2015 Stock Incentive Plan

The Board initially adopted the 2015 Plan in December 2015, subject to stockholder approval. The 2015 Plan became effective upon the closing of the Company's IPO on May 11, 2016 after approval by the Company's stockholders. The 2015 Plan provides for the issuance of common stock, stock options and other stock-based awards to employees, officers, directors, consultants and advisors of the Company.

On June 18, 2018, upon receipt of stockholder approval at the Company's 2018 annual meeting, the 2015 Plan was amended and restated in its entirety increasing the authorized number of shares of common stock reserved for issuance by 800,000 shares (together with the 2014 Plan, the 2015 Plan, the "Stock Incentive Plans"). The Board approved the Amended and Restated 2015 Plan on March 9, 2018. Pursuant to the Amended and Restated 2015 Plan, the number of shares authorized for issuance is the sum of 1,550,000 shares of common stock, plus the number of shares equal to the sum of (i) 116,863 shares of common stock, which was the number of shares reserved for issuance under the 2014 Plan that remained available for grant under the 2014 Plan immediately prior to the closing of the Company's IPO, and (ii) the number of shares of common stock subject to outstanding awards under the 2014 Plan that expire, terminate or are otherwise surrendered, cancelled or forfeited after the closing of the Company's IPO, provided that such number of shares of common stock shall not exceed 608,137 shares.

The exercise price of stock options cannot be less than the fair value of the common stock on the date of grant. Stock options awarded under the Stock Incentive Plans expire 10 years after the grant date, unless the Board sets a shorter term. As of September 30, 2018, the Company had 942,765 shares available for issuance under the Amended and Restated 2015 Plan.

The following table summarizes the option activity under the Stock Incentive Plans for the year ended December 31, 2017 and the nine months ended September 30, 2018:

	Options	Weighted-Average Exercise Price Per Share	Aggregate Intrinsic Value
Options outstanding at December 31, 2016	704,315	\$ 11.82	\$ —
Granted	297,500	8.45	—
Exercised	(10,000)	9.28	11,228
Cancelled	(3,250)	12.44	—
Outstanding at December 31, 2017	988,565	10.83	2,617,859
Granted	311,000	12.28	—
Exercised	—	—	—
Cancelled	—	—	—
Options outstanding at September 30, 2018	<u>1,299,565</u>	<u>\$ 11.18</u>	<u>\$ 1,673,033</u>
Options exercisable at September 30, 2018	<u>684,054</u>	<u>\$ 11.23</u>	<u>\$ 921,299</u>

As of September 30, 2018, all options outstanding have a weighted-average remaining contractual life of 7.9 years. The weighted-average fair value of all stock options granted for the nine months ended September 30, 2018 was \$8.73. Intrinsic value at September 30, 2018 is based on the closing price of the Company's common stock on that date of \$12.05 per share.

In January 2018, the Company issued a stock option award as an inducement grant for the purchase of an aggregate of 50,000 shares of the Company's common stock, outside of the Stock Incentive Plans, at an exercise price of \$12.02 per share. The inducement grant is excluded from the option activity table above.

There were no stock options granted prior to 2015. The assumptions the Company used to determine the fair value of stock options granted to employees and directors in 2018 to date and in 2017 are as follows, presented on a weighted-average basis.

	Nine Months Ended September 30,	
	2018	2017
Risk-free interest rate	2.5%	2.0%
Expected term (in years)	6.1	6.0
Expected volatility	82.5%	79.8%
Expected dividend yield	0%	0%

The following table summarizes the Company's stock-based compensation expense for the three and nine months ended September 30, 2018 and 2017 (in thousands):

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2018	2017	2018	2017
Stock-based compensation:				
Research and development	\$ 214	\$ 121	\$ 628	\$ 402
General and administrative	499	389	1,434	1,081
Total Stock-based compensation	<u>\$ 713</u>	<u>\$ 510</u>	<u>\$ 2,062</u>	<u>\$ 1,483</u>

The fair value of stock options vested during the nine months ended September 30, 2018 was \$1.8 million. At September 30, 2018, there was \$4.8 million of unrecognized stock-based compensation expense relating to stock options granted pursuant to the Stock Incentive Plans, which will be recognized over the weighted-average remaining vesting period of 2.3 years.

Reserved Shares

As of September 30, 2018 and December 31, 2017, the Company reserved the following shares of common stock for issuance of shares resulting from exercise of outstanding warrants and options, as well as issuance of shares available for grant under the Stock Incentive Plans:

	<u>September 30,</u> <u>2018</u>	<u>December 31,</u> <u>2017</u>
2016 BioHEP warrants	—	125,000
2016 IPO warrants	28,347	28,347
November Private Placement warrants	1,633,777	1,633,777
2014 and 2015 Stock Incentive Plans	2,242,330	1,448,100
Total	<u>3,904,454</u>	<u>3,235,224</u>

8. COMMITMENTS AND CONTINGENCIES

Leases

In March 2016, the Company entered into an operating lease for its former headquarters in Hopkinton, Massachusetts with a lease term through May 31, 2021. The total payments due during the term of the lease are approximately \$771,000. The Company vacated the premises as of June 1, 2018 and in July 2018, the Company entered into a sublease agreement to sublease its former Hopkinton, Massachusetts premises. The Company incurred a loss on the lease of approximately \$269,000, net of expected sublease income of approximately \$294,000. The loss on the lease is included the general and administrative expenses in the consolidated statement of operations and in other current liabilities (for the short-term liability) and other long-term liabilities (for the remaining long-term liability) in the consolidated balance sheet.

In October 2017, the Company entered into a lease agreement for the Company's new principal office and laboratory space located in Hopkinton, Massachusetts. The initial term of the lease is 125 months beginning on June 1, 2018, the date the Company began occupying the new premises. The Company has the option to extend the lease one time for an additional 5-year period. Following an eleven-month rent abatement period, the Company will be obligated to make monthly rent payments in the amount of approximately \$35,000, which is subject to increase by approximately 3% annually for the first five years of the lease and by approximately 2.5% annually thereafter. The total lease payments due during the term of the lease are approximately \$4.4 million. In addition, the Company is responsible under the lease for specified costs and charges, including certain operating expenses, utilities, taxes and insurance.

Rent paid under the leases for the three and nine months ended September 30, 2018 was \$38,000 and \$168,000, respectively. Rent paid for the three and nine months ended September 30, 2017 was \$59,000 and \$174,000, respectively.

Future minimum commitments due under all leases at September 30, 2018 are as follows (in thousands):

<u>Year</u>	
2018	\$ 38
2019	417
2020	588
2021	507
Thereafter	3,318
Total minimum lease payments	<u>\$ 4,868</u>

BioHEP Technologies Ltd. License Agreement

In January 2016, the Company entered into an amended and restated license agreement with BioHEP, which became effective on February 1, 2016.

Under the amended and restated license agreement, the Company agreed to pay BioHEP up to \$3.5 million in development and regulatory milestone payments for disease(s) caused by each distinct virus for which the Company develops licensed product(s). BioHEP is also eligible to receive tiered royalties in the low-to-mid single-digits on net product sales of licensed products by the Company and its affiliates and sub licensees, and a specified share of non-royalty sublicensing revenues the Company and its affiliates

receive from sub licensees, which share of sublicensing revenues is capped at a maximum aggregate of \$2.0 million under all such sublicenses. Milestone and royalty payments associated with the Company's amended and restated license agreement with BioHEP cannot be reasonably estimated as to whether or when they will occur. As of September 30, 2018, there have been no milestone or royalty payments made to BioHEP.

Contingencies

The Company accrues for contingent liabilities to the extent that the liability is probable and estimable. There are no accruals for contingent liabilities in these consolidated financial statements.

9. SUBSEQUENT EVENTS

The Company has evaluated subsequent events through the date on which the consolidated financial statements were issued, to ensure that this submission includes appropriate disclosure of events both recognized in the consolidated financial statements and events which occurred subsequently but were not recognized in the consolidated financial statements.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following information should be read in conjunction with the unaudited financial information and the notes thereto included in this Quarterly Report on Form 10-Q and the consolidated financial statements and notes thereto for the year ended December 31, 2017, and the related Management's Discussion and Analysis of Financial Condition and Results of Operations, contained in our Annual Report on Form 10-K filed with the United States Securities and Exchange Commission, or the SEC, on February 20, 2018.

This report contains forward-looking statements that are being made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, or PSLRA, with the intention of obtaining the benefits of the "safe harbor" provisions of the PSLRA. Forward-looking statements involve risks and uncertainties. In this Quarterly Report on Form 10-Q, words such as "may," "will," "expect," "anticipate," "estimate," "intend," and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) are intended to identify forward-looking statements.

Our actual results and the timing of certain events may differ materially from the results discussed, projected, anticipated, or indicated in any forward-looking statements. We caution our readers that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and the development of the industry in which we operate may differ materially from those expressed or implied by the forward-looking statements contained in this Quarterly Report on Form 10-Q.

We caution readers not to place undue reliance on any forward-looking statements made by us, which speak only as of the date they are made. We disclaim any obligation, except as specifically required by law and the rules of the SEC, to publicly update or revise any such statements to reflect any change in our expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

Overview

We are a clinical-stage biopharmaceutical company engaged in the discovery and development of a novel class of therapeutics using our proprietary small molecule nucleotide platform. Our compounds are synthetic nucleotide segments that are designed to mimic the interactions of nucleic acids with proteins. We design our compounds to selectively target and modulate the activity of specific proteins implicated in various disease states. We are developing our lead product candidate, inarigivir soproxil, or inarigivir, for the treatment of chronic hepatitis B virus, or HBV. We have designed our antiviral product candidates, including inarigivir, to selectively activate within infected cells the cellular protein, retinoic acid-inducible gene 1 (RIG-I), to inhibit viral replication and to cause the induction of intracellular interferon signaling pathways for antiviral defense. We believe that inarigivir, as a RIG-I agonist, could play an important role in antiviral therapy as a result of its dual mechanism of action that is designed to selectively modulate the body's immune response and inhibit viral replication. We are also developing additional product candidates, including our lead STING (STimulator of INterferon Genes) agonist product candidate, SB 11285, which is an immunotherapeutic agent for the potential treatment of selected cancers.

In April 2017, the World Health Organization, or WHO, Global Hepatitis Report estimated that 257 million people are chronically infected with chronic HBV worldwide, and nearly 900,000 people worldwide die every year due to complications from chronic HBV infection despite the availability of vaccines against the virus. There is no approved cure for chronic HBV and currently approved direct-acting antiviral therapies for the treatment of chronic HBV lack a broadly sustained response following the discontinuation of treatment.

We are developing inarigivir, an orally-administered investigational selective immunomodulator, as a potential backbone in a combinatorial treatment for chronic HBV, with a goal to accelerate and substantially increase functional cure rates in a simple, safe and selective manner. We are currently conducting a global Phase 2 multi-center clinical trial of inarigivir, which we refer to as the ACHIEVE trial, and we plan to initiate one or more Phase 2b/3 inarigivir clinical trials in 2019. We are also pursuing the development of SB 9225, a co-formulation of inarigivir with tenofovir disoproxil fumarate, or TDF, as a potential fixed-dose combination product for the treatment of patients with chronic HBV. In addition to our inarigivir clinical trials, we continue to explore collaborations, including with siRNA compounds targeting hepatitis B surface antigen, or HBsAg, as well as other antiviral and immunomodulatory mechanisms. We believe the immunomodulatory activity of inarigivir could become a key component of a future combinatorial treatment for patients infected with chronic HBV, increasing the percentage of chronic HBV patients who achieve a functional cure.

In July 2017, we entered into a clinical trial supply and collaboration agreement with Gilead Sciences, Inc., or Gilead, under which Gilead is funding and conducting a Phase 2 clinical trial examining the co-administration of inarigivir and Vemlidy® 25 mg (tenofovir alafenamide) in patients infected with chronic HBV. On August 2, 2018, we announced the expansion of the clinical trial being undertaken by Gilead Sciences, Inc. to include two additional cohorts. The new second cohort of the study will assess

inargivir 200mg co-administered with Vemlidy, subject to independent regulator assessments of the safety of inargivir at the 200mg dose. Additionally, a new third cohort has been added to examine the administration of inargivir 100mg in chronic HBV patients currently treated with nucleoside/tide analogues.

Our ongoing Phase 2 ACHIEVE trial is a placebo-controlled, sequential-cohort, double-blind trial to evaluate increasing doses of inargivir as monotherapy for 12 weeks followed by Viread® 300mg for an additional 12 weeks. Part A of the ACHIEVE trial has an adaptive trial design that enrolls chronically-infected HBV patients between 18 and 70 years of age who have been or will be assigned to one of four dosing cohorts, 25mg, 50mg, 100mg or 200mg of inargivir, or placebo, once daily for 12 weeks. All subjects then receive Viread® 300mg once daily for an additional 12 weeks of treatment. The adaptive trial design of Part A of the ACHIEVE trial allows us to conduct additional cohorts. Due to the favorable safety and tolerability profile and continuing dose response that we have observed in the ACHIEVE trial thus far, we plan to expand Part A of the ACHIEVE trial to include an exploratory fifth cohort evaluating inargivir 400mg.

In August 2018, we announced that, due to the expansion of the inargivir + tenofovir alafenamide co-administration program described above, the previously planned Part B of the ACHIEVE trial evaluating inargivir with TDF 300mg is no longer necessary and will not be completed.

In August 2018, we also announced results from the third cohort (inargivir 100mg) and aggregated results from Part A of the ACHIEVE trial. In the third cohort, 20 patients were randomized; 17 on inargivir 100mg (13 HBeAg-positive, 4 HBeAg-negative) and 3 on placebo. The primary endpoints, safety and antiviral activity, were achieved at both week 12 (inargivir monotherapy) and week 24 (following the switch to TDF after week 12). Inargivir was well tolerated with no serious adverse events observed. Overall, treatment-emergent adverse events ranged from mild to moderate in severity, with no observed interferon-like side effects or clinical or biochemical events above Grade 3. One HBeAg-negative patient on inargivir alone had an ALT flare >200 IU with reductions in HBV DNA and HBsAg consistent with previously described inargivir immune flares. We observed a maximum reduction in both HBV DNA and HBV RNA by up to 2.76log₁₀ and 5.0log₁₀, respectively. Overall, mean HBV DNA reduction at week 12 was 1.0log₁₀, with a mean 0.55log₁₀ reduction in HBeAg-positive patients and a mean 2.26log₁₀ reduction in HBeAg-negative patients, which was significantly superior (t-test: p=0.006) to combined placebo from all groups (n=11). Similar log reductions were seen for the secondary endpoint of HBV RNA reduction, with a mean 0.6log₁₀ reduction in HBeAg-positive patients and a mean 1.4log₁₀ reduction in HBeAg-negative patients. Three patients had a greater than 0.5log₁₀ reduction in HBsAg at either week 12 or week 24. Overall, 13 of 47 (28%) of inargivir-treated patients in the ACHIEVE trial have had a predefined HBsAg response of 0.5log₁₀ decrease, with a mean decrease in the responder group of 0.8log₁₀ (range 0.5 – 1.4log₁₀) at either week 12 or week 24 after the switch to TDF.

Inargivir responses have been proportional to the baseline HBsAg level and we believe are reflective of the mechanism of action of inargivir as an immunomodulator. Baseline HBsAg level < 10,000 IU (4log₁₀) has been the strongest predictor of response to inargivir across all cohorts for HBV DNA and HBV RNA reductions irrespective of HBeAg status. We believe this response is consistent with the known role of HBsAg as a down regulator of the host immune response to HBV.

In addition to our inargivir clinical development program, we are developing our lead STING agonist product candidate, SB 11285, as a potential next-generation immunotherapeutic agent for the treatment of selected cancers. In our preclinical studies in multiple tumor-derived cell lines, SB 11285 has been observed to cause the induction of cytokines consistent with engagement of the target, as well as cell death and apoptosis. Based on our preclinical studies performed to date, SB 11285 has reduced tumor volumes, without dose-limiting toxicities, in multiple rodent tumor models when administered intravenously or intratumorally. These findings lead us to believe that SB 11285 has the potential to be administered clinically by either route of administration, and that SB 11285 may be used to target a variety of tumors at various anatomic sites and, if approved, has the potential to be used in combination with other therapeutic modalities to enhance efficacy. We are currently advancing the SB 11285 program with preclinical, toxicology, and process development efforts. Subject to the results of these preclinical studies, we anticipate that we will submit an investigational new drug or clinical trial application for SB 11285 in the first half of 2019, and, if approved, initiate a Phase 1b clinical trial in cancer later in 2019.

To date, we have devoted substantially all of our resources to research and development efforts, including conducting clinical trials for our product candidates, protecting our intellectual property and providing general and administrative support for these operations. We have not generated any revenue to date other than from grants from the National Institutes of Health, or NIH. No additional funding remains available to us under any grant for the development of any of our product candidates. We have funded our operations primarily through proceeds received from private placements of convertible notes, common stock and/or warrants; the exercise of options and warrants; NIH grant funding; and public offerings of securities.

We have incurred significant annual net operating losses in every year since our inception and expect to continue to incur significant expenses and net operating losses for the foreseeable future. Our net losses for the three and nine months ended

September 30, 2018 were \$8.8 million and \$17.4 million, respectively, and our net losses for the three and nine months ended September 30, 2017 were \$10.8 and \$26.2 million, respectively. As of September 30, 2018, we had an accumulated deficit of \$96.6 million. Our net losses may fluctuate significantly from quarter to quarter and year to year. We expect to continue to incur significant expenses and increasing operating losses for the next several years.

We anticipate that our expenses will increase significantly as we continue to develop inarigivir, SB 11285 and our other product candidates. See “—Liquidity and Capital Resources—Funding Requirements.” As a result, we will need additional financing to support our continuing operations. Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of public or private equity or debt financings, including our at-the-market offering program with Cantor Fitzgerald & Co., or other sources, which may include collaborations with third parties. Arrangements with collaborators or others may require us to relinquish rights to certain of our technologies or product candidates. Adequate additional financing may not be available to us on acceptable terms, or at all. Our inability to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy. We will need to generate significant revenue to achieve and sustain profitability, and we may never be able to do so.

As of September 30, 2018, we had \$71.3 million in cash, cash equivalents and marketable securities. We expect that our cash, cash equivalents and marketable securities as of September 30, 2018 will enable us to fund our operating expenses and capital expenditure requirements for at least the next 12 months. See “—Liquidity and Capital Resources.”

We do not expect to generate revenue from product sales unless and until we successfully complete development and obtain regulatory approval for one or more of our product candidates, which we expect will take a number of years and is subject to significant uncertainty. We have no manufacturing facilities, and all of our manufacturing activities are contracted out to third parties. Additionally, we currently utilize third-party contract research organizations, or CROs, to carry out our clinical development activities, and we do not yet have a sales organization. If we obtain regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses related to product sales, marketing, manufacturing and distribution. Accordingly, we will seek to continue to fund our operations through public or private equity or debt financings or other sources including geographic partnerships. However, we may be unable to raise additional funds or enter into other arrangements when needed on favorable terms or at all. Our failure to raise capital or enter into such other arrangements as and when needed would have a negative impact on our financial condition and our ability to develop our products.

Financial Operations Overview

Operating expenses

Our operating expenses since inception have consisted primarily of research and development expense and general and administrative costs.

Research and development

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

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

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

Our primary focus of research and development since inception has been on the development of inarigivir. Our direct research and development expenses consist primarily of external costs, such as fees paid to investigators, consultants and CROs in connection with our preclinical studies and clinical trial and regulatory fees. We do not allocate employee-related costs and other indirect costs to specific research and development programs because our primary focus has been on the discovery and development of inarigivir. Our direct research and development expenses are not currently tracked on a program-by-program basis.

The successful development of our product candidates is highly uncertain. Accordingly, at this time, we cannot reasonably estimate the nature, timing and costs of the efforts that will be necessary to complete the remainder of the development of these product candidates. We are also unable to predict when, if ever, we will generate revenues from inarigivir or any of our other current or potential product candidates. This is due to the numerous risks and uncertainties associated with developing medicines, including the uncertainties of:

- establishing an appropriate safety profile with IND-enabling toxicology studies;
- successful enrollment in and completion of clinical trials;
- receipt of marketing approvals from applicable regulatory authorities;
- establishing commercial manufacturing capabilities or making arrangements with third-party manufacturers;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our product candidates;
- launching commercial sales of the products, if and when approved, whether alone or in collaboration with others; and
- a continued acceptable safety profile of the products following approval.

A change in the outcome of any of these variables with respect to any of our product candidates would significantly change the costs and timing associated with the development of that product candidate.

Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect that our research and development expenses will continue to increase in the foreseeable future as we continue development of our current product candidates and research and develop new product candidates. However, we do not believe that it is possible at this time to accurately project total program-specific expenses through commercialization. There are numerous factors associated with the successful commercialization of any of our product candidates, including future trial design and various regulatory requirements, many of which cannot be determined with accuracy at this time based on our stage of development. Additionally, future commercial and regulatory factors beyond our control will impact our clinical development programs and plans.

General and administrative

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

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

Other income (expense)

Other income (expense) consists of interest income earned on our cash, cash equivalents, restricted cash and marketable securities and the gain/loss on the change in the fair value of the warrant liabilities.

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

Accrued Research and Development Expenses

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

- CROs in connection with performing research services on our behalf and clinical trials;
- investigative sites or other providers in connection with clinical trials;
- vendors in connection with preclinical and clinical development activities; and
- vendors related to product manufacturing, development and distribution of preclinical and clinical supplies.

We base our expenses related to preclinical studies and clinical trials on our estimates of the services received and efforts expended pursuant to quotes and contracts with CROs that conduct and manage clinical trials on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. There may be instances in which payments made to our vendors will exceed the level of services provided and result in a prepayment of the clinical expense. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, we estimate the time period over which services will be performed, enrollment of patients, number of sites activated and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we adjust the accrual or amount of prepaid expense accordingly. Although we do not expect our estimates to be materially different from amounts actually incurred, our understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in us reporting amounts that are too high or too low in any particular period. To date, we have not made any material adjustments to our prior estimates of accrued research and development expenses.

Liability-Classified Warrants

In connection with our private placement offering in November 2016, we issued warrants to purchase 1,644,737 shares of common stock, which we refer to as our November 2016 Warrants, to a group of accredited investors. The November 2016 Warrants became exercisable beginning May 24, 2017 at an exercise price of \$10.79 per share. We evaluated the terms of these warrants and concluded that they should be liability-classified. We recognize any change in the value of the warrant liability each reporting period in the statement of operations. As of September 30, 2018, the fair value of the warrants was approximately \$9.3 million, which is a decrease of \$3.8 million from the fair value of approximately \$13.1 million as of December 31, 2017. See Note 7 of the notes to the unaudited financial statements included elsewhere in this Quarterly Report on Form 10-Q.

Stock-Based Compensation

We issue stock-based awards to employees and non-employees, generally in the form of stock options. We account for our stock-based compensation awards in accordance with Financial Accounting Standards Board, (FASB) ASC Topic 718, *Compensation—Stock Compensation*, or ASC 718. ASC 718 requires all stock-based payments to employees, including grants of employee stock options and modifications to existing stock awards, to be recognized in the statements of operations and comprehensive loss based on their fair values. We adopted ASU 2018-07, *Improvements to Nonemployee Share-Based Payment Accounting*, effective July 1, 2018, which aligns the accounting treatment of nonemployee awards with employee awards. Described below is the methodology we have utilized in measuring stock-based compensation expense. Stock option, common stock and restricted stock values are determined based on a blend of our stock price and the quoted market price of our comparable public companies.

We measure stock options and other stock-based awards granted to employees, nonemployees and directors based on the fair value on the date of grant and recognize the corresponding compensation expense of those awards, over the requisite service period, which is generally the vesting period of the respective award. Generally, we issue stock options and restricted stock awards with only service-based vesting conditions and record the expense for these awards using the straight-line method. We adopted ASU No. 2016-09, *Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*, or ASU 2016-09, effective January 1, 2017. Prior to adoption, share-based compensation expense was recognized on a straight-line basis, net of estimated forfeitures, such that expense was recognized only for share-based awards that are expected to vest. A forfeiture rate was estimated annually and revised, if necessary, in subsequent periods if actual forfeitures differed from initial estimates. Following adoption of ASU 2016-09, we no longer apply a forfeiture rate and instead will account for forfeitures as they occur.

We estimate the fair value of each stock option grant using the Black-Scholes option-pricing model. Use of this model requires that we make assumptions as to the fair value of our common stock, the volatility of our common stock, the expected term of our stock options, the risk-free interest rate for a period that approximates the expected term of our stock options and our expected dividend yield. Because we lack company-specific historical and implied volatility information due in part to the limited time in which we have operated as a publicly traded company, we estimate our expected volatility based on the historical volatility of a group of publicly traded peer companies. We expect to continue to do so until such time as we have adequate historical data regarding the volatility of our traded stock price. We use the simplified method prescribed by the SEC’s Staff Accounting Bulletin No. 107, *Share-Based Payment*, to calculate the expected term of options granted to employees and directors. We base the expected term of options granted to consultants and nonemployees on the contractual term of the options. We determine the risk-free interest rate by reference to the United States Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. Expected dividend yield is based on the fact that we have never paid cash dividends and do not expect to pay any cash dividends in the foreseeable future.

There were no stock options granted prior to 2015. We recognize forfeitures as they occur and the compensation expense is reversed in the period that the forfeiture occurs.

In 2015, we began issuing stock options to employees, directors and consultants. During the periods ended September 30, 2018 and 2017, we issued common stock to consultants and advisors as compensation for services and recognized expense equal to the fair value of the shares issued. The following table summarizes the classification of our stock-based compensation expenses recognized in our consolidated statements of operations and comprehensive loss (in thousands):

We expect the impact of our stock-based compensation expense for stock options granted to employees and non-employees to grow in future periods due to the potential increases in the fair value of our common stock and the increase in the number of grants as a result of an increase in headcount.

	For the Three Months Ended		For the Nine Months Ended	
	September 30,		September 30,	
	2018	2017	2018	2017
Research and development	\$ 214	\$ 121	\$ 628	\$ 402
General and administrative	499	389	1,434	1,081
	<u>\$ 713</u>	<u>\$ 510</u>	<u>\$ 2,062</u>	<u>\$ 1,483</u>

JOBS Act

In April 2012, the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, was enacted. Section 107 of the JOBS Act provides that an “emerging growth company,” or EGC, can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. Thus, an EGC can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably

elected not to avail ourselves of this extended transition period and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

Subject to certain conditions, as an EGC, we intend to rely on certain exemptions afforded by the JOBS Act, including the exemption from: certain requirements related to the disclosure of executive compensation in our periodic reports and proxy statements, and the requirement that we hold a nonbinding advisory vote on executive compensation and any golden parachute payments; the requirement that the auditors provide an attestation report on our system of internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act; and complying with any requirement that may be adopted by the Public Company Accounting Oversight Board, or PCAOB, regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements, known as the auditor discussion and analysis. We will remain an EGC until the earliest of the last day of the fiscal year in which we have total annual gross revenues of approximately \$1.07 billion or more; the last day of the fiscal year following the fifth anniversary of the date of the completion of the closing of our IPO; the date on which we have issued more than \$1 billion in nonconvertible debt during the previous three years; or the date on which we are deemed to be a large accelerated filer under the rules of the SEC.

Results of Operations

Comparison of the Three and Nine Months Ended September 30, 2018 and 2017

The following table summarizes our results of operations for the three and nine months ended September 30, 2018 and 2017 (in thousands):

	For the Three Months Ended September 30,			For the Nine Months Ended September 30,		
	2018	2017	Change	2018	2017	Change
Operating expenses:						
Research and development	\$ 5,656	\$ 3,221	\$ 2,435	\$ 15,188	\$ 9,152	\$ 6,036
General and administrative	2,059	1,968	91	6,681	5,811	870
Total operating expenses	7,715	5,189	2,526	21,869	14,963	6,906
Loss from operations	(7,715)	(5,189)	(2,526)	(21,869)	(14,963)	(6,906)
Other income	271	141	130	603	220	383
Change in fair value of warrant liabilities	(1,336)	(5,780)	4,444	3,837	(11,474)	15,311
Net loss	<u>\$ (8,780)</u>	<u>\$ (10,828)</u>	<u>\$ 2,048</u>	<u>\$ (17,429)</u>	<u>\$ (26,217)</u>	<u>\$ 8,788</u>

Research and development expenses.

Research and development expenses were \$5.7 million for the three months ended September 30, 2018, compared to \$3.2 million for the three months ended September 30, 2017. The increase of \$2.5 million for the three months ended September 30, 2018 was due primarily to an increase of \$1.9 million in spending on preclinical studies and clinical trial related activities for inarigivir and preclinical studies for SB 11285, an increase of \$0.2 million in salaries and benefits associated with higher research and development headcount, an increase of \$0.1 million for laboratory supplies and laboratory equipment maintenance, an increase of \$0.1 million related to lease costs, an increase of \$0.1 million related to building maintenance costs and an increase in non-cash charges of \$0.1 million related to stock-based compensation.

Research and development expenses were \$15.2 million for the nine months ended September 30, 2018, compared to \$9.2 million for the nine months ended September 30, 2017. The increase of \$6.0 million for the nine months ended September 30, 2018 was due primarily to an increase in spending on preclinical studies and clinical trial related activities for inarigivir and preclinical studies for SB 11285 of \$4.9 million, an increase of \$0.5 million in salaries and benefits associated with higher research and development headcount, an increase of \$0.1 million for laboratory supplies and laboratory equipment maintenance, an increase of \$0.1 million related to building maintenance costs, an increase of \$0.1 million related to lease costs and an increase in non-cash charges of \$0.3 million related to stock-based compensation and depreciation expenses.

General and administrative expenses.

General and administrative expenses were \$2.1 million for the three months ended September 30, 2018, compared to \$2.0 million for the three months ended September 30, 2017. The increase of \$0.1 million for the three months ended September 30, 2018 was primarily due to an increase of \$0.1 million in non-cash charges for stock-based compensation and an increase of \$0.1 million in salaries and benefits, which were offset by a decrease of \$0.1 million in consulting related costs.

General and administrative expenses were \$6.7 million for the nine months ended September 30, 2018, compared to \$5.8 million for the three months ended September 30, 2017. The increase of \$0.9 million for the nine months ended September 30, 2018 was primarily due to an increase in non-cash charges of \$0.4 million for stock-based compensation and \$0.3 million for lease related costs, an increase of \$0.2 million for legal related costs, an increase of \$0.1 million in salaries and benefits and an increase of \$0.1 million for consulting related costs, which were offset by a decrease of \$0.2 million in public company related costs.

Other income. Other income for the three and nine months ended September 30, 2018 and 2017 is solely comprised of interest income. Interest income for the three and nine months ended September 30, 2018 was \$0.3 million and \$0.6 million, respectively, and was primarily related to the interest earned on marketable securities. Interest income for the three and nine months ended September 30, 2017 was \$0.1 million and \$0.2 million, respectively, and was primarily related to the interest earned on marketable securities. The increase in interest income in the three and nine months ended September 30, 2018 was due to a higher average balance of marketable securities as a result of the receipt of proceeds primarily from our June 2017 and June 2018 public offerings.

Change in fair value of warrant liabilities. Change in fair value of warrant liabilities for the three months ended September 30, 2018 was a loss of \$1.3 million, which was solely related to the change in the fair value of the November 2016 Warrants resulting from an increase in our stock price and expected stock price volatility. Change in fair value of warrant liabilities for the nine months ended September 30, 2018 was a gain of \$3.8 million, which was solely related to the change in the fair value of the November 2016 Warrants resulting from a decrease in our stock price and expected stock price volatility. The change in the fair value of the warrant liabilities for the three and nine months ended September 30, 2017 was a loss of \$5.8 million and \$11.5 million, respectively, and was solely related to the change in fair value of the November 2016 Warrants resulting from an increase in our stock price.

Liquidity and Capital Resources

Sources of Liquidity

From our inception through September 30, 2018, we have financed our operations through proceeds received from private placements of convertible notes, common stock and/or warrants, the exercise of options and warrants, NIH grant funding and public offerings of securities. As of September 30, 2018, we had cash, cash equivalents and marketable securities totaling \$71.3 million and an accumulated deficit of \$96.6 million.

In August 2018, we issued and sold in an underwritten public offering an aggregate of 3,246,079 shares of our common stock at \$12.50 per share, which included 246,079 shares pursuant to the exercise of an option to purchase additional shares granted to the underwriters in connection with the offering. The shares issued in this offering were registered under the Securities Act pursuant to our Registration Statement on Form S-3 (Registration No. 333-218399) that was declared effective by the SEC on June 12, 2017, which we refer to as the S-3 Registration Statement, and a prospectus supplement and base prospectus filed on August 9, 2018. The offering resulted in \$38.0 million of net proceeds, after deducting underwriting discounts and commissions and other offering expenses payable by us.

In August 2017, we entered into a Controlled Equity Offering Sales Agreement, or Sales Agreement, with Cantor Fitzgerald & Co., or Cantor, pursuant to which we may offer and sell, from time to time through Cantor, shares of our common stock having an aggregate offering price of up to \$50.0 million. We will pay Cantor a commission rate equal to 3.0% of the aggregate gross proceeds from each sale. Shares sold under the Sales Agreement will be offered and sold pursuant to the S-3 Registration Statement and a prospectus supplement and accompanying base prospectus that we filed with the SEC on August 18, 2017. During the three months ended September 30, 2018, we did not sell any shares under the Sales Agreement. During the nine months ended September 30, 2018, we sold an aggregate of 217,329 shares of our common stock under the Sales Agreement at a weighted average selling price of \$15.42 per share, which resulted in \$3.2 million of net proceeds. During the year ended December 31, 2017, we sold an aggregate of 252,443 shares of our common stock pursuant to the Sales Agreement at a weighted-average selling price of \$15.55 per share, which resulted in \$3.7 million of net proceeds.

In June 2017, we issued and sold in an underwritten public offering an aggregate of 3,269,219 shares of our common stock at \$13.00 per share, which included 384,604 shares pursuant to the exercise of an option to purchase additional shares granted to the underwriters in connection with the offering. The shares issued in this offering were registered under the Securities Act pursuant to the S-3 Registration Statement. The offering resulted in \$39.6 million of net proceeds, after deducting underwriting discounts and commissions and other offering expenses payable by us.

In November 2016, we entered into a definitive agreement with a group of accredited investors resulting in a private placement of 1,644,737 shares of our common stock and warrants to purchase 1,644,737 shares of common stock, which we refer to as

the November 2016 Private Placement. These investors paid \$9.12 for each share of common stock and warrant to purchase one share of common stock. The warrants will be exercisable beginning May 24, 2017 with a term of five years at an exercise price of \$10.79. We completed the November 2016 Private Placement on November 23, 2016, resulting in approximately \$15.0 million in gross proceeds. Net proceeds from this issuance after deducting placement agent fees and other offering-related expenses were \$13.7 million.

In May 2016, we completed our IPO and sold an aggregate of 944,900 shares of common stock at a price to the public of \$12.00 per share, which included 24,900 shares pursuant to the exercise of an option to purchase additional shares granted to the underwriters in connection with the IPO. The offering resulted in \$8.2 million of net proceeds, after deducting underwriting discounts and commissions and other offering expenses payable by us. In connection with the closing of the IPO, we received approximately \$5.3 million in proceeds upon the exercise of previously issued warrants to purchase 641,743 shares of common stock.

Cash Flows

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

	For the Nine Months Ended September 30,	
	2018	2017
Net cash used in operating activities	\$ (18,357)	\$ (12,640)
Net cash used in investing activities	(23,076)	(19,919)
Net cash provided by financing activities	41,171	39,664
Net (decrease) increase in cash, cash equivalents and restricted cash	\$ (262)	\$ 7,105

Net cash used in operating activities. The use of cash in both periods resulted primarily from our net losses adjusted for non-cash charges and changes in components of working capital. Net cash used in operating activities was \$18.4 million and \$12.6 million during the nine months ended September 30, 2018 and 2017, respectively. The increase in cash used in operating activities for the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017 of \$5.8 million was primarily due to an increase in prepaid expenses and other current assets of \$0.4 million, an increase in other assets of \$0.1 million, an increase of accounts payable of \$0.6 million, which were offset by a decrease in the net loss of \$8.8 million and accrued expenses of \$0.8 million. In addition, there was an increase in the non-cash change in the fair value of the warrant liability of \$15.3 million, an increase in non-cash stock-based compensation of \$0.6 million, an increase in non-cash investment income of \$0.4 million and an increase in non-cash depreciation of \$0.1 million.

Net cash used in investing activities. Net cash used in investing activities was \$23.1 million for the nine months ended September 30, 2018 and net cash provided by investing activities was \$19.9 million for the nine months ended September 30, 2017. The cash used in investing activities of \$23.1 million in the nine months ended September 30, 2018 was primarily the result of \$28.8 million in proceeds from the sale of marketable securities, which was offset by \$50.0 million for the purchase of marketable securities and \$1.9 million for the purchase of property and equipment. The cash used in investing activities of \$19.9 million for the nine months ended September 30, 2017 was mainly due to proceeds of \$14.6 million from the sale of marketable securities, which was offset by \$34.4 million for the purchase of marketable securities and \$0.1 million for the purchase of property and equipment for the nine months ended September 30, 2017.

Net cash provided by financing activities. Net cash provided by financing activities was \$41.2 million during the nine months ended September 30, 2018 compared to \$39.7 million during the nine months ended September 30, 2017. The cash provided by financing activities in the nine months ended September 30, 2018 was primarily the result of \$38.0 million of net proceeds from the August 2018 common stock offering and \$3.2 million of net proceeds from our at-the-market offering program under the Sales Agreement. The cash provided by financing activities in the nine months ended September 30, 2017 was primarily the result of \$39.6 million of net proceeds from the June 2017 common stock offering and \$0.1 million of proceeds from the exercise of stock options.

Funding Requirements

We expect to continue to incur significant and increasing losses for the foreseeable future. We anticipate these losses to increase as our expenses increase, and we expect that our expenses will increase if and as we:

- continue to develop and conduct clinical trials of inarigivir, including our ongoing Phase 2 ACHIEVE trial of inarigivir for chronic HBV;
- continue preclinical development of SB 11285, our lead STING agonist product candidate, and initiate clinical trials of SB 11285, if supported by the preclinical data;
- initiate and continue research and preclinical and clinical development efforts for our other product candidates, including SB 9225, a potential fixed-dose co-formulation product that combines inarigivir and tenofovir disoproxil fumarate;
- seek to identify and develop additional product candidates;
- seek regulatory and marketing approvals for our product candidates that successfully complete clinical trials, if any;
- establish sales, marketing, distribution and other commercial infrastructure in the future to commercialize various products for which we may obtain marketing approval, if any;
- require the manufacture of larger quantities of product candidates for clinical development and potentially commercialization;
- maintain, expand and protect our intellectual property portfolio;
- hire and retain additional personnel, including clinical, quality control and scientific personnel;
- add operational, financial and management information systems and personnel, including personnel to support our product development and help us continue to comply with our obligations as a public company; and
- add equipment and physical infrastructure to support our research and development programs and the buildout and transition to our new corporate headquarters.

We expect that our existing cash, cash equivalents and marketable securities as of September 30, 2018 will enable us to fund our operating expenses and capital expenditure requirements for at least the next 12 months. We have based this estimate on assumptions that may prove to be wrong, and we may use our available capital resources sooner than we currently expect. Because of the numerous risks and uncertainties associated with the development of our product candidates, we are unable to estimate the amounts of increased capital outlays and operating expenses associated with completing the research and development of our product candidates. Our future capital requirements, both near and long-term, will depend on many factors, including, but not limited to:

- initiation, progress, timing, costs and results of preclinical studies and clinical trials of inarigivir, including our Phase 2 ACHIEVE clinical trial in patients with chronic HBV;
- initiation, progress, timing, costs and results of preclinical studies and clinical trials, if applicable, of SB 11285;
- initiation, progress, timing, costs and results of preclinical studies and clinical trials of our other product candidates, including SB 9225;
- our obligation to make royalty and non-royalty sublicense payments to third-party licensors, if any, under our licensing agreements;
- the timing, receipt, and amount of milestone payments or royalties, if any, from inarigivir, SB 11285, SB 9225 or any of our other product candidates;
- the number and characteristics of product candidates that we discover or in-license and develop;

- the outcome, timing and cost of seeking regulatory review by the FDA and comparable foreign regulatory authorities, including the potential for the FDA or comparable foreign regulatory authorities to require that we perform more studies than those that we currently expect;
- the costs of filing, prosecuting, defending and enforcing any patent claims and maintaining and enforcing other intellectual property rights;
- subject to receipt of marketing approval, revenue, if any, received from commercial sales of inarigivir and any other products;
- the costs and timing of the implementation of commercial-scale manufacturing activities;
- the costs and timing of establishing sales, marketing and distribution capabilities for any product candidates for which we may receive regulatory approval; and
- the costs of operating as a public company.

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

Adequate additional funds may not be available to us on acceptable terms, or at all. We do not currently have any committed external source of funds. We have an effective shelf S-3 Registration Statement. In August 2017, we entered into the Sales Agreement with Cantor pursuant to which we may offer and sell, from time to time through Cantor, shares of our common stock having an aggregate offering price of up to \$50.0 million. Shares sold under the Sales Agreement will be offered and sold pursuant to the S-3 Registration Statement and a prospectus supplement and accompanying base prospectus that we filed with the SEC on August 18, 2017. As of September 30, 2018, we had up to \$59.6 million in securities available for future issuance under the S-3 Registration Statement, which included \$42.7 million in shares issuable pursuant to the Sales Agreement with Cantor. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interests of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our common stockholders. Additional debt financing and equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends and may require the issuance of warrants, which could potentially dilute the ownership interests of our stockholders.

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

Contractual Obligations and Commitments

The following table summarizes our contractual obligations at September 30, 2018, and the effect such obligations are expected to have on our liquidity and cash flow in future periods (in thousands):

	Payments Due by Period				
	Total	Less Than 1 Year	1 – 3 Years	3 – 5 Years	More than 5 Years
Operating lease commitments	\$ 4,868	\$ 311	\$ 1,129	\$ 1,378	\$ 2,050
Total	<u>\$ 4,868</u>	<u>\$ 311</u>	<u>\$ 1,129</u>	<u>\$ 1,378</u>	<u>\$ 2,050</u>

In addition to the amounts shown in the above table, we have contractual obligations pursuant to our amended and restated license agreement with BioHEP. Under this agreement, we have agreed to pay up to \$3.5 million in development and regulatory milestone payments to BioHEP for each distinct viral indication for which we develop licensed product(s). BioHEP is also eligible to receive tiered royalties in the low-to-mid single-digits on net product sales of licensed products by us and our affiliates and sub licensees, and a specified share of non-royalty sublicensing revenues we and our affiliates receive from sub licensees, which share of sublicensing revenues is capped at a maximum aggregate of \$2.0 million under all such sublicenses. Milestone and royalty payments

associated with our amended and restated license agreement with BioHEP have not been included in the above table of contractual obligations as we cannot reasonably estimate if or when they will occur.

In October 2017, we entered into a lease agreement for our new principal office and laboratory space. The initial term of the lease is 125 months beginning on June 1, 2018, the date we began occupying the new premises. Following an 11-month rent abatement period, we will be obligated to make monthly rent payments in the amount of approximately \$35,000, which is subject to increase by approximately 3% annually for the first five years of the lease and by approximately 2.5% annually thereafter. The total lease payments due during the term of the lease are approximately \$4.4 million. In addition, we are responsible under the lease for specified costs and charges, including certain operating expenses, utilities, taxes and insurance.

We enter into contracts in the normal course of business with third party service providers for clinical trials, preclinical research studies and testing, manufacturing and other services and products for operating purposes. We have not included our payment obligations under these contracts in the table as these contracts generally provide for termination upon notice, and therefore we believe that our non-cancelable obligations under these agreements are not material. We could also enter into additional research, manufacturing, supplier and other agreements in the future, which may require up-front payments and even long-term commitments of cash.

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

In May 2014, the Financial Accounting Standards Board, or FASB, issued ASU 2014-09, *Revenue from Contracts with Customers* (Topic 606), which clarifies the principles for recognizing revenue and develops a common revenue standard for U.S. GAAP and International Financial Reporting Standards, or IFRS. This standard removes inconsistencies and limitations between U.S. GAAP and IFRS in revenue requirements, provides a more robust framework for addressing revenue issues, improves comparability of revenue recognition practices across entities, industries, jurisdictions, and capital markets, provides more useful information to users of financial statements through improved disclosure requirements, and simplifies the preparation of financial statements by reducing the number of requirements to which an entity must refer. Entities can transition to the standard either retrospectively or as a cumulative-effect adjustment as of the date of adoption. This update is effective for annual periods beginning after December 15, 2017, including interim periods within that reporting period and early application is not permitted. We adopted this standard as of January 1, 2018; however, until we expect material revenue to be recognized, the adoption of this standard is not expected to have an impact on our consolidated financial statements.

In January 2016, the FASB issued ASU 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*, which amends Accounting Standards Codification, or ASC, Subtopic 825-10, *Financial Instruments - Overall*, and includes updates on certain aspects of recognition, measurement, presentation and disclosure of financial instruments and applies to all entities that hold financial assets or owe financial liabilities. The new standard is effective for our annual period beginning after December 15, 2017, with early adoption permitted. We adopted this standard as of January 1, 2018; however, the adoption of this standard does not have an impact on our consolidated financial statements.

In September 2016, the FASB issued ASU 2016-15, *Classification of Certain Cash Receipts and Cash Payments*, which amends ASC Topic 230, *Statement of Cash Flows*, and includes provisions intended to reduce diversity in practice and provides guidance on eight specific statements of cash flows classification issues. The new standard is effective for our annual period ending after December 15, 2017, and for annual and interim periods thereafter, with early adoption permitted. We adopted this standard as of January 1, 2018; however, the adoption of this standard did not have an impact on our consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, which supersedes the current leasing guidance and upon adoption, will require lessees to recognize right-of-use assets and lease liabilities on the balance sheet for all leases with terms longer than twelve months. Based on certain criteria, leases will be classified as either financing or operating, with classification affecting the pattern of expense recognition in the income statement. For leases with a term of twelve months or less, a lessee is permitted to make an accounting policy election by class of underlying assets not to recognize lease assets and lease liabilities. If a lessee makes this election, it should recognize lease expense for such leases generally on a straight-line basis over the lease term. The new standard is effective for our annual period beginning after December 15, 2018 and early adoption is permitted. We are currently evaluating the impact that the adoption of this standard may have on our consolidated financial statements.

In July 2017, the FASB issued ASU 2017-11, *Earnings Per Share (Topic 260), Distinguishing Liabilities from Equity (Topic 480), Derivatives and Hedging (Topic 815): I. Accounting for Certain Financial Instruments with Down Round Features and II. Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interests with a Scope Exception*. Part I applies to entities that issue financial instruments such as warrants, convertible debt or convertible preferred stock that contain down round features. Part II simply replaces the indefinite deferral for certain mandatorily redeemable noncontrolling interests and mandatorily redeemable financial instruments of nonpublic entities contained within Accounting Standards Codification (“ASC”) Topic 480 with a scope exception and does not impact the accounting for these mandatorily redeemable instruments. This ASU is effective for public companies for the annual reporting periods beginning after December 15, 2018, and interim periods within those annual periods. Early adoption is permitted. We are currently evaluating the impact that the adoption of this standard may have on our consolidated financial statements.

In June 2018, the FASB issued ASU 2018-07, *Improvements to Nonemployee Share-Based Payment Accounting*, which amends ASC Topic 718, *Compensation – Stock Compensation*, and includes provisions intended to provide simplification of several aspects of accounting for nonemployee share-based payment transactions. The new standard is effective for us for the annual period beginning after December 15, 2018, including interim periods within that fiscal year. Early adoption is permitted, but no earlier than the date on which we adopted Topic 606. We elected early adoption of this standard as of September 30, 2018. The adoption of this standard has resulted in a de minimis impact on our consolidated financial statements.

Other accounting standards that have been issued or proposed by the FASB or other standards-setting bodies that do not require adoption until a future date are not expected to have a material impact on our consolidated financial statements upon adoption.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

We are exposed to market risk related to changes in interest rates. Our cash, cash equivalents and marketable securities of \$71.3 million as of September 30, 2018, consisted of cash, money market accounts and short-term marketable debt securities. Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. However, because of the short-term nature of the instruments in our portfolio, an immediate 10% change in market interest rates would not be expected to have a material impact on the fair market value of our investment portfolio or on our financial condition or results of operations.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and our principal financial officer, evaluated, as of the end of the period covered by this Quarterly Report on Form 10-Q, the effectiveness of our disclosure controls and procedures. Based on that evaluation of our disclosure controls and procedures as of September 30, 2018, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures as of such date are effective at the reasonable assurance level. 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 are 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 us in the reports we file or submit under the Exchange Act is accumulated and communicated to our management, including our principal executive officer and principal financial and accounting officer, 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 our management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Inherent Limitations of Internal Controls

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the three months ended September 30, 2018, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. We are not presently a party to any material litigation.

Item 1A. Risk Factors.

There have been no material changes in or additions to the risk factors included in our Annual Report on Form 10-K for the year ended December 31, 2017 and our Quarterly Report on Form 10-Q for the three months ended June 30, 2018.

Item 6. Exhibits.

The exhibits filed as part of this Quarterly Report on Form 10-Q are set forth on the Exhibit Index.

EXHIBIT INDEX

Exhibit Number	Description
10.1	Amendment No. 1 to Lease Agreement between 35 Parkwood Realty LLC and Spring Bank Pharmaceuticals, Inc., dated August 10, 2018.
10.2	Spring Bank Pharmaceuticals, Inc. Amended and Restated Non-Employee Director Compensation Policy.
31.1	Certification of Principal Executive Officer 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.
31.2	Certification of Principal Financial Officer 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.
32.1	Certification of Principal Executive Officer and 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 Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

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.

Spring Bank Pharmaceuticals, Inc.

Date: October 25, 2018

By: /s/ Jonathan Freve
Jonathan Freve
Chief Financial Officer and Treasurer
(Principal Financial and Accounting Officer)

FIRST AMENDMENT TO LEASE

THIS FIRST AMENDMENT TO LEASE (this "First Amendment") is made as of August 10, 2018 (the "Effective Date") by and between 35 PARKWOOD REALTY LLC, a Massachusetts limited liability company ("**Landlord**"), and SPRING BANK PHARMACEUTICALS, INC., a Delaware corporation ("**Tenant**").

WHEREAS, Landlord and Tenant entered into that certain Lease Agreement dated as of October 4, 2017 (the "Existing Lease") with respect to approximately 19,446 rentable square feet of office space (the "Office Premises") and approximately 10,037 rentable square feet of laboratory space (the "Lab Premises") and approximately 1,832 rentable square feet of lab support space (the "Lab Support Premises;" collectively, the Office Premises, the Lab Premises and the Lab Support Premises are referred to herein as the "Premises") in the building located at 35 Parkwood Drive, Hopkinton, Massachusetts (the "Building"), as more particularly described in the Existing Lease; and

WHEREAS, Landlord has performed certain work in the Office Premises (the "Office Work") to prepare it for occupancy by Tenant, and is performing certain work in the Lab Premises (the "Lab Work"), each as shown on the plans and described on the scope of work attached to Exhibit D of the Existing Lease (collectively, the Office Work and the Lab Work are referred to herein as "Landlord's Work"), and pursuant to the terms of the Existing Lease, the Term of the Lease is scheduled to commence upon substantial completion of Landlord's Work; and

WHEREAS, Landlord completed the Office Work (including punch list items) and Tenant has been occupying the Office Premises since June 1, 2018 (the "Office Premises Commencement Date"), and Landlord and Tenant desire to revise the Existing Lease to: (a) commence the Term of the Lease with regard to the Office Premises on June 1, 2018, (b) Landlord completed the Lab Premises and Tenant has been occupying the Lab Premises since July 16, 2018 and the Landlord and Tenant desire to commence the Term with regard to the Lab Premises upon July 16, 2018 (the "Lab Premises Commencement Date"), as set forth in the Existing Lease, and (c) to commence the Term with regard to the Lab Support Premises on the Lab Premises Commencement Date;

NOW, THEREFORE, in consideration of the foregoing and for other consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as set forth below in this First Amendment. Capitalized terms used in this First Amendment and not defined shall have their respective meanings set forth in the Existing Lease.

1. Existing Lease. The Existing Lease, as amended and affected by this First Amendment, is hereinafter referred to as the "Lease." As of the Effective Date, all references to the Lease in the Existing Lease shall mean the Existing Lease as amended by this First Amendment.

2. (a) Term Commencement for Office Premises, Lab Premises and Lab Support Premises. Notwithstanding any provision of the Existing Lease to the contrary, including without limitation the definitions of "Term" and "Term Commencement Date" in the *Basic Lease Information* appended thereto, as of the Effective Date, for all purposes under the Lease, the Term shall be deemed to have commenced with regard to the Office Premises on the Office Premises Commencement Date. As set

forth in the Existing Lease and above in this First Amendment, the Term with regard to the Lab Premises shall commence upon the Lab Premises Commencement Date. The Term with regard to the Lab Support Premises shall be deemed to have commenced for all purposes under the Lease on the Lab Premises Commencement Date.

(b) Confirmation of Term and Rent Commencement Dates. The Term Commencement Date of the Existing Lease shall be deemed to be June 1, 2018; the Rent Commencement Date of the Existing Lease shall be as set forth below in Section 3 of this First Amendment; the Term is scheduled to expire on October 31, 2028; and Tenant has the one-time right to terminate the Existing Lease effective October 31, 2027, provided that a Termination Notice and Termination Fee (as defined in Section 28 of the Existing Lease) must be delivered to Landlord on or before October 31, 2025. For the avoidance of doubt, this First Amendment shall eliminate the requirement in the Existing Lease that Landlord and Tenant execute and deliver Exhibit I to the Existing Lease, the Form of Confirmation of Term and Rent Commencement Dates.

3. **Basic Rent.** Tenant shall begin paying Basic Rent for the Office Premises on May 1, 2019, which is the first day following expiration of the 11-month rent abatement period set forth in the Existing Lease (the “Office Premises Rent Commencement Date”), and Basic Rent for the Lab Premises on the first day of the twelfth (12) month following the Lab Premises Commencement Date (the “Lab Premises Rent Commencement Date”). As of the Effective Date, the two (2) tables in the *Basic Lease Information* section that provide the Basic Rent for the Office/Lab Premises and the Lab Support Premises shall be deleted and replaced with the three (3) tables below.

a. *Office Premises (19,446 rsf)*

Period	Rental rate per rsf	Annual Fixed Rent	Monthly Fixed Rent
June 1, 2018 – April 30, 2019 Months 1 – 11	\$0*	\$0	\$0
May 1, 2019 – April 30, 2020 Months 12 - 23	\$13.75	N/A	\$22,281.87
May 1, 2020 – April 30, 2021 Months 24 - 35	\$14.16	\$275,355.36	\$22,946.28
May 1, 2021 – April 30, 2022 Months 36 – 47	\$14.58	\$283,522.68	\$23,626.89
May 1, 2022 – April 30, 2023 Months 48 – 59	\$15.02	\$292,078.92	\$24,339.91
May 1, 2023 – April 30, 2024 Months 60 – 71	\$15.40	\$299,468.40	\$24,955.70
May 1, 2024 – April 30, 2025 Months 72 – 83	\$15.79	\$307,052.34	\$25,587.69

May 1, 2025 – April 30, 2026 Months 84 – 95	\$16.18	\$314,636.28	\$26,219.69
May 1, 2026 – April 30, 2027 Months 96 – 107	\$16.59	\$322,609.14	\$26,884.09
May 1, 2027 – April 30, 2028 Months 108 – 119	\$17.00	\$330,582.00	\$27,548.50
May 1, 2028 - October 31, 2028 Months 120 – 125	\$17.43	N/A	\$28,245.31

b. *Lab Premises (10,037 rsf)*

Period	Rental rate per rsf	Annual Fixed Rent	Monthly Fixed Rent
July 16, 2018 – June 15, 2019	\$0*	\$0	\$0
June 16, 2019 – June 30, 2019	\$13.75	N/A	\$5,750.36
July 1, 2019 – April 30, 2020	\$13.75	N/A	\$11,500.73
May 1, 2020 – April 30, 2021 Months 24 - 35	\$14.16	\$142,123.92	\$11,843.66
May 1, 2021 – April 30, 2022 Months 36 – 47	\$14.58	\$146,339.46	\$12,194.95
May 1, 2022 – April 30, 2023 Months 48 – 59	\$15.02	\$150,755.74	\$12,562.98
May 1, 2023 – April 30, 2024 Months 60 – 71	\$15.40	\$154,569.80	\$12,880.82
May 1, 2024 – April 30, 2025 Months 72 – 83	\$15.79	\$158,484.23	\$13,207.02
May 1, 2025 – April 30, 2026 Months 84 – 95	\$16.18	\$162,398.66	\$13,533.22
May 1, 2026 – April 30, 2027 Months 96 – 107	\$16.59	\$166,513.83	\$13,876.15
May 1, 2027 – April 30, 2028 Months 108 – 119	\$17.00	\$170,629.00	\$14,219.08
May 1, 2028 - October 31, 2028 Months 120 – 125	\$17.43	N/A	\$14,578.74

c. *Lab Support Premises (1,832 rsf)*

Period	Rental rate per rsf	Annual Fixed Rent	Monthly Fixed Rent
July 16, 2018 – June 15, 2019	\$0	\$0	\$0
June 16, 2019- June 30, 2019	\$6.00	N/A	\$458.00
July 1, 2019 – April 30, 2020	\$6.00	N/A	\$916.00
May 1, 2020 – April 30, 2021 Months 24 - 35	\$6.18	\$11,321.76	\$943.48
May 1, 2021 – April 30, 2022 Months 36 - 47	\$6.36	\$11,651.52	\$970.96
May 1, 2022 – April 30, 2023 Months 48 - 59	\$6.55	\$11,999.60	\$999.97
May 1, 2023 – April 30, 2024 Months 60 - 71	\$6.71	\$12,292.72	\$1,024.39
May 1, 2024 – April 30, 2025 Months 72 - 83	\$6.88	\$12,604.16	\$1,050.35
May 1, 2025 – April 30, 2026 Months 84 - 95	\$7.05	\$12,915.60	\$1,076.30
May 1, 2026 – April 30, 2027 Months 96 - 107	\$7.23	\$13,245.36	\$1,103.78
May 1, 2027 – April 30, 2028 Months 108 - 119	\$7.41	\$13,575.12	\$1,131.26
May 1, 2028 - October 31, 2028 Months 120 - 125	\$7.59	N/A	\$1,158.74

*Notwithstanding any portion of the three tables above, Tenant shall begin making payments of all sums other than Basic Rent due under the Lease, including without limitation, Additional Rent as set forth in Section 4(b) of the Existing Lease, as of the Office Premises Commencement Date and the Lab Premises Term Commencement Date.

4. Excluded Fixtures. Pursuant to Section 22 of the Existing Lease, Exhibit A attached to this First Amendment shall hereby be incorporated into the Existing Lease. (Tenant to provide an Equipment List)

5. Ratification. Except as amended and modified by this First Amendment, all the terms, provisions, agreements, covenants and conditions of the Existing Lease are hereby affirmed and ratified. From and after the Effective Date, all references to the "Lease" shall mean the Existing Lease as amended hereby, and to the extent that there any inconsistencies between this First Amendment and the Existing Lease, this First Amendment shall control.

6. Execution/Entire Agreement. This First Amendment, together with the Lease as affected hereby, constitutes the entire agreement of the parties, and may not be amended except by written instrument signed by all parties. This First Amendment shall have the effect of an agreement under seal and shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. This First Amendment may be executed in counterparts all of which taken together shall constitute an original executed document.

[Remainder of page intentionally left blank; signature page follows.]

IN WITNESS WHEREOF, the parties have executed this First Amendment as of the date first set forth above.

LANDLORD:

35 PARKWOOD REALTY, LLC,
a Massachusetts limited liability company

By: /s/ John R. Parsons Jr.
Name: John R. Parsons Jr.
Title: Managing Member

TENANT:

SPRING BANK PHARMACEUTICALS, INC.,
a Delaware corporation

By: /s/ Jonathan Freve
Name: Jonathan Freve
Title: CFO

Hereunto duly authorized

Exhibit A
Excluded Fixtures

Laboratory hoods and permanent benches

SPRING BANK PHARMACEUTICALS, INC.**AMENDED AND RESTATED NON-EMPLOYEE DIRECTOR COMPENSATION POLICY****(Effective as of September 13, 2018)**

The Board of Directors of Spring Bank Pharmaceuticals, Inc. (the “Company”) has approved the following Amended and Restated Non-Employee Director Compensation Policy (this “Policy”) which establishes compensation to be paid to non-employee directors of the Company, effective as of September 13, 2018 (“Effective Time”), to provide an inducement to obtain and retain the services of qualified persons to serve as members of the Company’s Board of Directors.

Applicable Persons

This Policy shall apply to each director of the Company who is not an employee of the Company or any Affiliate (each, a “Non-Employee Director”). “Affiliate” shall mean an entity which is a direct or indirect parent or subsidiary of the Company, as determined pursuant to Section 424 of the Internal Revenue Code of 1986, as amended.

Stock Option Grants

All stock option amounts set forth herein shall be subject to automatic adjustment in the event of any stock split or other recapitalization affecting the Company’s common stock.

Annual Stock Option Grants

Annually, each Non-Employee Director who has served as a director for at least six (6) months shall be granted a non-qualified stock option to purchase 5,500 shares of the Company’s common stock under the Company’s 2015 Stock Incentive Plan (the “Stock Plan”) on the date of the Company’s annual meeting of stockholders (the “Annual Meeting Date”). The shares shall be automatically issued as of the Annual Meeting Date without any further action required by the Board of Directors.

Initial Stock Option Grant for Newly Appointed or Elected Directors

Each new Non-Employee Director shall be granted a non-qualified stock option to purchase 11,000 shares of the Company’s common stock under the Stock Plan at the first regularly scheduled meeting of the Board of Directors on or after his or her initial appointment or election to the Board of Directors.

Terms for All Option Grants

Unless otherwise specified by the Board of Directors or the Compensation Committee at the time of grant, all options granted under this Policy shall (i) vest in equal monthly installments at the end of each successive month following the grant date until (a) for all initial stock option grants, the third anniversary of the grant date and (b) for all annual stock option grants, the first anniversary of the grant date, in each case subject to the Non-Employee Director's continued service on the Board of Directors; (ii) have an exercise price equal to the fair market value of the Company's common stock as determined in the Stock Plan on the grant date; (iii) terminate ten years after the grant date; (iv) accelerate in full upon the occurrence of a Change in Control; and (v) contain such other terms and conditions as set forth in the form of option agreement approved by the Board of Directors or the Compensation Committee prior to the grant date.

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

- (a) the acquisition by an individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934 (the "Exchange Act") (a "Person") of beneficial ownership of any capital stock of the Company if, after such acquisition, such Person beneficially owns (within the meaning of Rule 13d-3 under the Exchange Act) more than 50% of either (x) the then-outstanding shares of common stock of the Company (the "Outstanding Company Common Stock") or (y) the combined voting power of the then-outstanding securities of the Company entitled to vote generally in the election of directors (the "Outstanding Company Voting Securities"); provided, however, that for purposes of this subsection any acquisition directly from the Company will not be a Change in Control;
- (b) the consummation of a merger, consolidation, reorganization, recapitalization or share exchange involving the Company or a sale or other disposition of all or substantially all of the assets of the Company (a "Business Combination"), unless, immediately following such Business Combination, the individuals and entities who were the beneficial owners of the Outstanding Company Common Stock and Outstanding Company Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, more than 50% of the then-outstanding shares of common stock and the combined voting power of the then-outstanding securities entitled to vote generally in the election of directors, respectively, of the resulting or acquiring corporation in such Business Combination (which shall include a corporation that as a result of such transaction owns the Company or substantially all of the Company's assets either directly or through one or more subsidiaries); or
- (c) the liquidation or dissolution of the Company;

provided that, where required to avoid additional taxation under Section 409A of the Internal Revenue Code and the guidance issued thereunder, the event that occurs must also be a

“change in the ownership or effective control of a corporation, or a change in the ownership of a substantial portion of the assets of a corporation” as defined in Treasury Reg. § 1.409A-3(i)(5).

Annual Fees

Each Non-Employee Director serving on the Board of Directors and the Audit Committee, Compensation Committee and/or Nominating and Corporate Governance Committee, as applicable, shall be entitled to the following annual amounts (the “Annual Fees”):

Board of Directors or Committee of Board of Directors	Annual Retainer Amount for Member	Annual Retainer Amount for Chairman
Board of Directors	\$35,000	\$65,000 ¹
Audit Committee	\$7,500	\$15,000
Compensation Committee	\$5,000	\$10,000
Nominating and Corporate Governance Committee	\$3,750	\$7,500
Science and Technology Committee	\$3,750	\$7,500

Except as otherwise set forth in this Policy, all Annual Fees shall be paid for the period from January 1 through December 31 of each year. All Annual Fees shall be paid in either cash in the amount of each Non-Employee Director’s Annual Fees or such number of shares of the Company’s common stock as is equal to the full dollar amount of each Non-Employee Director’s Annual Fees (as calculated below under “Calculation of Shares and Grant Terms”).

Election

Each Non-Employee Director shall make an annual election on a form provided by the Company, indicating whether cash or common stock is elected, prior to December 31 of the year prior to the payment of the Annual Fees; provided, however, for the fiscal year ending December 31, 2017, such election shall be made prior to March 31, 2017 for the final nine month period of fiscal 2017. In the event that a Non-Employee Director has not submitted his or her election for the applicable year by December 31, then the election of such Non-Employee Director shall be deemed to be the same as the election made by such Non-Employee Director for the prior year, and if no election has been made, then the Non-Employee Director shall receive all Annual Fees in cash. Each newly elected or appointed Non-Employee Director shall make an election prior to the beginning of the next calendar quarter after his or her initial appointment or election.

Payments

¹ Includes \$35,000 as a member plus \$30,000 for service as chairman of the board. The chairman of the board only receives an additional retainer for such service if he or she is a non-employee director.

Payments payable to Non-Employee Directors shall be paid quarterly in arrears as of the last business day of each fiscal quarter, provided that (i) the amount of such payment shall be prorated for any portion of such quarter that such director was not serving on the Board or a committee and (ii) no fee shall be payable in respect of any period prior to the date such director was elected to the Board or a committee.

Calculation of Shares and Grant Terms

If shares of common stock are to be received as payment, the number of shares shall be calculated by dividing the applicable quarterly dollar amount that the Non-Employee Director has elected to be paid in shares of common stock by the Fair Market Value (as defined in the Stock Plan) of the shares of common stock of the Company on the first business day of the quarter following the quarter in which the fees are earned (the "Calculation Date") (rounded down to the nearest whole number so that no fractional shares shall be issued). Effective as of January 1, 2019, the Calculation Date for a quarter shall be deemed to be the *last* business day of the quarter in which the fees are earned. The shares shall be automatically and without any further action required by the Board of Directors issued as of the Calculation Date.

If the Non-Employee Director ceases providing services on the Board, the number of shares to be received by a Non-Employee Director shall be calculated by dividing the applicable prorated quarterly dollar amount that the Non-Employee Director has elected to be paid in shares of common stock by the Fair Market Value (as defined in the Stock Plan) of the shares of common stock of the Company on the last day of service (rounded down to the nearest whole number so that no fractional shares shall be issued). The shares shall be automatically and without any further action required by the Board of Directors issued as of such date.

Expenses

Upon presentation of documentation of such expenses reasonably satisfactory to the Company, each Non-Employee Director shall be reimbursed for his or her reasonable out-of-pocket business expenses incurred in connection with attending meetings of the Board of Directors and committees thereof or in connection with other business related to the Board of Directors.

Amendments

The Compensation Committee shall periodically review this Policy to assess whether any amendments in the type and amount of compensation provided herein should be made and shall make recommendations to the Board of Directors for its approval of any amendments to this Policy.

**CERTIFICATION PURSUANT TO
SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002**

I, Martin Driscoll, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Spring Bank Pharmaceuticals, 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(s) 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - 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) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - 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(s) 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: October 25, 2018

By: /s/ Martin Driscoll
Martin Driscoll
Chief Executive Officer and President
(Principal Executive Officer)

**CERTIFICATION PURSUANT TO
SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002**

I, Jonathan Freve, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Spring Bank Pharmaceuticals, 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(s) 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - 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) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - 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(s) 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: October 25, 2018

By: /s/ Jonathan Freve
Jonathan Freve
Chief Financial Officer and Treasurer
(Principal Financial and Accounting Officer)

**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 of Spring Bank Pharmaceuticals, Inc. (the "Company") on Form 10-Q for the period ending September 30, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 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 result of operations of the Company.

Date: October 25, 2018

By: /s/ Martin Driscoll
Martin Driscoll
Chief Executive Officer
(Principal Executive Officer)

Date: October 25, 2018

By: /s/ Jonathan Freve
Jonathan Freve
Chief Financial Officer and Treasurer
(Principal Financial and Accounting Officer)

This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Spring Bank Pharmaceuticals, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.

