AmpliPhi Biosciences Corp
Form 10-Q
May 15, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

x **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE**

SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended March 31, 2017

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: 001-37544

AMPLIPHI BIOSCIENCES CORPORATION
(Exact name of registrant as specified in its charter)

Washington	**91-1549568**

(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

3579 Valley Centre Drive, Suite 100
San Diego, California **92130**
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: **(858) 829-0829**

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 x No ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files).

Yes x No ¨

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

Large accelerated filer ¨	Accelerated filer ¨
Non-accelerated filer ¨ (Do not check if a small reporting company)	Smaller reporting company x
	Emerging growth company x

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. x

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ¨ No x

The number of shares of the Registrant's Common Stock, par value $0.01 per share, outstanding at May 10, 2017 was 6,627,836.

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AmpliPhi Biosciences Corporation

Consolidated Balance Sheets

	March 31, 2017 (Unaudited)	December 31, 2016
Assets		
Current assets		
Cash and cash equivalents	$ 2,202,000	$ 5,711,000
Accounts receivable, net	15,000	25,000
Prepaid expenses and other current assets	343,000	619,000
Total current assets	2,560,000	6,355,000
Property and equipment, net	982,000	1,072,000
In process research and development	10,461,000	10,461,000
Acquired patents, net	299,000	307,000
Total assets	$ 14,302,000	$ 18,195,000
Liabilities, Series B redeemable convertible preferred stock and stockholders' equity		
Current liabilities		
Accounts payable and accrued expenses	$ 1,109,000	$ 1,659,000
Deferred revenue	86,000	-
Accrued compensation	884,000	895,000
Dividends payable	38,000	38,000
Insurance premium liability	161,000	185,000
Note payable	598,000	803,000
Total current liabilities	2,876,000	3,580,000
Derivative liabilities	2,329,000	2,443,000
Deferred tax liability	2,449,000	2,449,000
Total liabilities	7,654,000	8,472,000
Series B redeemable convertible preferred stock $0.01 par value; no shares authorized at March 31, 2017 and December 31, 2016; no shares issued and outstanding at March 31, 2017 and December 31, 2016	-	-
Stockholders' equity		
Common stock, $0.01 par value; 67,000,000 shares authorized at March 31, 2017 and December 31, 2016; 1,648,751 shares issued and outstanding at March 31, 2017 and December 31, 2016	165,000	165,000
Additional paid-in capital	391,097,000	390,918,000
Accumulated deficit	(384,614,000)	(381,360,000)
Total stockholders' equity	6,648,000	9,723,000
Total liabilities, Series B redeemable convertible preferred stock and stockholders' equity	$ 14,302,000	$ 18,195,000

See accompanying condensed notes to consolidated financial statements.

AmpliPhi Biosciences Corporation

Consolidated Statements of Operations

	Three Months Ended March 31,	
	2017	2016
	(Unaudited)	(Unaudited)
Revenue	$ 29,000	$ 106,000
Operating expenses		
Research and development	1,490,000	1,980,000
General and administrative	1,898,000	2,644,000
Total operating expenses	3,388,000	4,624,000
Loss from operations	(3,359,000)	(4,518,000)
Other income (expense)		
Change in fair value of derivative liabilities	114,000	1,406,000
Other expense, net	(1,000)	-
Total other income, net	113,000	1,406,000
Net loss	(3,246,000)	(3,112,000)
Accretion of Series B redeemable convertible preferred stock	-	(1,725,000)
Net loss attributable to common stockholders	$ (3,246,000)	$ (4,837,000)
Net loss per share of common stock - basic & diluted	$ (1.94)	$ (8.22)
Weighted average number of shares of common stock outstanding - basic & diluted	1,677,497	588,350

See accompanying condensed notes to consolidated financial statements.

AmpliPhi Biosciences Corporation

Consolidated Statements of Cash Flows

	Three Months Ended March 31,	
	2017 (Unaudited)	2016 (Unaudited)
Operating activities:		
Net loss	$ (3,246,000)	$ (3,112,000)
Adjustments required to reconcile net loss to net cash used in operating activities:		
Change in fair value of derivative liabilities	(114,000)	(1,406,000)
Stock-based compensation	171,000	816,000
Non-cash interest expense	7,000	-
Warrants expensed to in-process research and development	-	204,000
Amortization of patents	8,000	8,000
Depreciation	85,000	73,000
Other non-cash adjustments	3,000	-
Changes in operating assets and liabilities:		
Accounts receivable, net	10,000	111,000
Accounts payable, accrued expenses, deferred revenue and other	(520,000)	507,000
Accrued compensation	(11,000)	(241,000)
Prepaid expenses and other current assets	308,000	(45,000)
Net cash used in operating activities	(3,299,000)	(3,085,000)
Investing activities:		
Purchases of property and equipment	(5,000)	(112,000)
Net cash used in investing activities	(5,000)	(112,000)
Financing activities:		
Principal payment on note payable	(205,000)	-
Net cash used in financing activities	(205,000)	-
Net decrease in cash and cash equivalents	(3,509,000)	(3,197,000)
Cash and cash equivalents, beginning of period	5,711,000	9,370,000
Cash and cash equivalents, end of period	$ 2,202,000	$ 6,173,000
Supplemental schedule of non-cash financing activities:		
Accretion of Series B redeemable convertible preferred stock	$ -	$ 1,725,000

See accompanying condensed notes to consolidated financial statements.

AmpliPhi Biosciences Corporation

Condensed Notes to Consolidated Financial Statements

March 31, 2017
(Unaudited)

1. Organization and Description of the Business

AmpliPhi Biosciences Corporation (the "Company") was incorporated in the state of Washington in 1989 under the name Targeted Genetics Corporation. In February 2011, Targeted Genetics Corporation changed its name to AmpliPhi Biosciences Corporation. The Company is dedicated to developing novel antibacterial therapies called bacteriophage (phage). Phages are naturally occurring viruses that preferentially target and kill their bacterial targets.

2. Liquidity

The Company has prepared its consolidated financial statements on a going concern basis, which assumes that the Company will realize its assets and satisfy its liabilities in the normal course of business. However, the Company has incurred net losses since its inception and has negative operating cash flows. These circumstances could raise substantial doubt about the Company's ability to continue as a going concern. The accompanying financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classifications of liabilities that may result from the outcome of the uncertainty concerning the Company's ability to continue as a going concern.

As of March 31, 2017, the Company had cash and cash equivalents of $2.2 million. On May 10, 2017, the Company completed an underwritten public offering of common stock, pre-funded warrants and common warrants, resulting in net proceeds to the Company of approximately $9.1 million (see Note 12). In addition, the Company has filed an Australian tax return for the year 2016 and currently expects receipt of approximately $1.8 million in tax rebate incentive payments from the Australian tax authority in the third quarter of 2017, subject to review of the tax return by Australian tax authorities. There can be no assurance that the Company will receive such tax rebate when or in the amount currently anticipated, or at all.

Management has made operational changes that are expected to reduce cash expenditures in 2017 and support the Company's strategic emphasis on precisely targeted personalized bacteriophage therapies. Considering the Company's current cash resources, including the net proceeds received from the public offering in May 2017, management

believes the Company's existing resources will be sufficient to fund the Company's planned operations until the end of the second quarter of 2018. For the foreseeable future, the Company's ability to continue its operations is dependent upon its ability to obtain additional capital.

3. Significant Accounting Policies

The Company's significant accounting policies are described in Note 3 to the consolidated financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2016, filed with the Securities and Exchange Commission (SEC). Since the date of those financial statements, there have been no material changes to the Company's significant accounting policies. The interim consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries Biocontrol Limited, Ampliphi Biotehnološke Raziskave in Razvoj d.o.o., and AmpliPhi Australia Pty Ltd. All significant intercompany accounts and transactions have been eliminated.

Basis of Presentation

The accompanying unaudited consolidated financial statements of the Company should be read in conjunction with the audited financial statements and notes thereto as of and for the year ended December 31, 2016 included in the Company's Annual Report on Form 10-K, filed with the SEC. The accompanying financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP") for interim financial statements and in accordance with the instructions to Form 10-Q. Any reference in these notes to applicable guidance is meant to refer to authoritative U.S. GAAP as found in the Accounting Standards Codification ("ASC") and Accounting Standards Update ("ASU") of the Financial Accounting Standards Board ("FASB").

In the opinion of management, the accompanying consolidated financial statements include all adjustments that are of a normal and recurring nature and that are necessary for the fair presentation of the Company's financial position and the results of its operations and cash flows for the periods presented. Interim results are not necessarily indicative of results for the full year or any future period.

Reverse Stock Split

On April 21, 2017, the Company filed Articles of Amendment to Amended and Restated Articles of Incorporation with the Secretary of State of the State of Washington that effected a 1-for-10 (1:10) reverse stock split of its common stock, par value $0.01 per share, effective April 24, 2017. All common share, warrant, stock option, and per share information in the consolidated financial statements gives retroactive effect to the 1-for-10 reverse stock split that was effected on April 24, 2017. In connection with the reverse stock split, the Company adjusted its authorized common stock, from 670,000,000 to 67,000,000 shares. The par value of its common stock was unchanged at $0.01 per share,

post-split.

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Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in its consolidated financial statements and accompanying notes. On an ongoing basis, management evaluates these estimates and judgments, which are based on historical and anticipated results and trends and on various other assumptions that management believes to be reasonable under the circumstances. By their nature, estimates are subject to an inherent degree of uncertainty and, as such, actual results may differ from management's estimates.

Warrant and Preferred Shares Conversion Features and Derivative Liabilities

The Company accounts for warrants and derivative instruments and preferred shares conversion features under the applicable accounting guidance which requires the warrant and preferred share conversion features to be recorded as liabilities and adjusted to fair value at each reporting period. Changes in fair value of warrant and derivative liabilities are recorded as non-operating income or loss in the consolidated statements of operations.

Reclassification

Certain prior period amounts have been reclassified to conform to the current period presentation.

Recent Accounting Pronouncements Not Yet Adopted

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*. The ASU creates a single source of revenue guidance for companies in all industries. The new standard provides guidance for all revenue arising from contracts with customers and affects all entities that enter into contracts to provide goods or services to their customers, unless the contracts are within the scope of other accounting standards. It also provides a model for the measurement and recognition of gains and losses on the sale of certain nonfinancial assets. This guidance, as amended, must be adopted using either a full retrospective approach for all periods presented or a modified retrospective approach and will be effective for fiscal years beginning after December 15, 2017 with early adoption permitted. The Company plans to adopt this ASU on January 1, 2018, and is in the process of evaluating the impact of adopting the guidance on its consolidated financial statements.

In February 2015, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, which amends the FASB Accounting Standards Codification and creates Topic 842, "Leases." The new topic supersedes Topic 840, "Leases," and increases transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and requires disclosures of key information about leasing arrangements. The guidance is effective for reporting periods beginning after December 15, 2018. ASU 2016-02 mandates a modified retrospective transition method. The Company plans to adopt this ASU on January 1, 2019 and is in the process of evaluating the impact of adopting the guidance on its consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Cash Flow Statements, Classification of Certain Cash Receipts and Cash Payments*, which addresses eight specific cash flow classification issues with the objective of reducing diversity in practice. The amendments are effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted. The adoption of this guidance is not expected to have a material impact on the Company's consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles - Goodwill and Other, Simplifying the Accounting for Goodwill Impairment*. ASU 2017-04 removes Step 2 of the goodwill impairment test, which requires a hypothetical purchase price allocation. A goodwill impairment will now be the amount by which a reporting unit’s carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. All other goodwill impairment guidance will remain largely unchanged. Entities will continue to have the option to perform a qualitative assessment to determine if a quantitative impairment test is necessary. This new guidance will be applied prospectively, and is effective for calendar year end companies in 2020. Early adoption is permitted for any impairment tests performed after January 1, 2017. Adoption of this ASU is not expected to have a material impact on the Company’s consolidated financial statements.

Recently Adopted Accounting Standards

In August 2014, the FASB issued ASU No. 2014-15, *Presentation of Financial Statements-Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*, which defines management's responsibility to assess an entity's ability to continue as a going concern, and to provide related footnote disclosures if there is substantial doubt about its ability to continue as a going concern. The Company adopted this ASU as of December 31, 2016 and conformed its footnote disclosure in accordance with the disclosure requirements under this standard.

In November 2015, the FASB issued ASU No. 2015-17, *Balance Sheet Classification of Deferred Taxes*. The ASU is part of a simplification initiative aimed at reducing complexity in accounting standards. Current U.S. GAAP requires the deferred taxes for each jurisdiction (or tax-paying component of a jurisdiction) to be presented as a net current asset or liability and net noncurrent asset or liability. To simplify presentation, the new guidance requires that all deferred tax assets and liabilities, along with any related valuation allowance, be classified as noncurrent on the balance sheet. The Company adopted this ASU as of January 1, 2017 and the adoption did not have an impact on the Company’s consolidated financial statements.

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In March 2016, the FASB issued ASU No. 2016-09, *Compensation – Stock Compensation, (Topic 718)*. This ASU changes certain aspects of accounting for share-based payments to employees and involves several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. Specifically, ASU 2016-09 requires that all income tax effects of share-based awards be recognized as income tax expense or benefit in the reporting period in which they occur. Additionally, ASU 2016-09 amends existing guidance to allow forfeitures of share-based awards to be recognized as they occur. Previous guidance required that share-based compensation expense include an estimate of forfeitures. The Company adopted this ASU as of January 1, 2017 and elected to account for forfeitures as they occur. The cumulative effect of adoption was made on a modified retrospective basis and resulted in an increase of $8,000 to both additional paid-in capital and accumulated deficit.

4. Fair Value of Financial Assets and Liabilities — Derivative Instruments

ASC Topic 820, *Fair Value Measurement* (ASC 820), establishes a fair value hierarchy for instruments measured at fair value that distinguishes between assumptions based on market data (observable inputs) and the Company's own assumptions (unobservable inputs). Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability, and are developed based on the best information available in the circumstances.

ASC 820 identifies fair value as the exchange price, or exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As a basis for considering market participant assumptions in fair value measurements, ASC Topic 820 establishes a three-tier fair value hierarchy that distinguishes among the following:

- Level 1—Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access.
- Level 2—Valuations based on quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active and models for which all significant inputs are observable, either directly or indirectly.
- Level 3—Valuations based on inputs that are unobservable and significant to the overall fair value measurement.

The Company estimates fair values of derivative instruments utilizing Level 3 inputs, which is based on the lowest level of any input that is significant to the fair value measurement. The Company uses the Monte Carlo and Black-Scholes valuation technique for derivatives which embodies all of the requisite assumptions (including trading volatility, remaining term to maturity, market price, strike price, risk-free rates) necessary to determine fair value of

these instruments.

The Company’s derivative liabilities are marked-to-market with the changes in fair value recorded as a component of change in fair value of derivative liabilities in the Company’s consolidated statements of operations. Estimating fair values of derivative financial instruments, including Level 3 instruments, requires the use of significant and subjective inputs that may, and are likely to, change over the duration of the instrument with related changes in internal and external market factors. In addition, option-based techniques are volatile and sensitive to changes in the Company’s trading market price, the trading market price of various peer companies and other key assumptions. Since derivative financial instruments are initially and subsequently carried at fair value, income will reflect this sensitivity of internal and external factors.

Items measured at fair value on a recurring basis include common stock warrants and a dilutive financing derivative liability (see Notes 6 and 8). During the periods presented, the Company has not changed the manner in which it values liabilities that are measured at fair value using Level 3 inputs. The following fair value hierarchy table presents information about each major category of the Company's financial liabilities measured at fair value on a recurring basis:

	Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
March 31, 2017				
Liabilities				
June 2016 offering warrant liability	$ -	$ -	$ 245,000	$245,000
Dilutive financing derivative liability	-	-	123,000	123,000
November 2016 offering warrant liability	-	-	1,961,000	1,961,000
Total liabilities	$ -	$ -	$ 2,329,000	$2,329,000
December 31, 2016				
Liabilities				
June 2016 offering warrant liability	$ -	$ -	$ 274,000	$274,000
Dilutive financing derivative liability	-	-	126,000	126,000
November 2016 offering warrant liability	-	-	2,043,000	2,043,000
Total liabilities	$ -	$ -	$ 2,443,000	$2,443,000

There were no transfers between Level 1, Level 2 or Level 3 of the fair value hierarchy for the three months ended March 31, 2017 or the year ended December 31, 2016.

The following table sets forth a summary of changes in the fair value of the Company's derivative and warrant liabilities, which represents a recurring measurement that is classified within Level 3 of the fair value hierarchy, wherein fair value is estimated using significant unobservable inputs:

	June 2016 Offering Warrant Liability	Dilutive Financing Derivative Liability	November 2016 Offering Warrant Liability	Total Derivative Liabilities
Balance, December 31, 2016	$ 274,000	$ 126,000	$ 2,043,000	$2,443,000
Changes in estimated fair value	(29,000)	(3,000)	(82,000)	(114,000)
Balance, March 31, 2017	$ 245,000	$ 123,000	$ 1,961,000	$2,329,000

In connection with an issuance of warrants exercisable for an aggregate of 106,383 shares of common stock under a registered public offering, the Company incurred the June 2016 offering warrant liability (see Note 8). The fair value of the June 2016 offering warrant liability on the date of issuance and on each re-measurement date was estimated using the Black-Scholes valuation model. This method of valuation involves using inputs such as the fair value of the Company’s common stock, stock price volatility, risk–free interest rates and dividend yields. Due to the nature of these inputs, the valuation of the warrants is considered a Level 3 measurement. The assumptions used consisted of the following:

	March 31, 2017	December 31, 2016
Volatility	115 %	118 %
Expected term (years)	4.17	4.42
Risk-free interest rate	1.81 %	1.80 %
Dividend yield	0.00 %	0.00 %
Exercise price	$ 22.50	$ 22.50
Common stock closing price	$ 4.30	$ 4.40

The dilutive financing derivative liability was recorded on the accompanying consolidated balance sheet at its initial value on April 8, 2016 and is marked-to-market at each balance sheet date until the liability is relieved. The fair value of the dilutive financing derivative liability on each measurement date is estimated using the Monte Carlo valuation model (see Note 6). For this liability, the Company develops its own assumptions that do not have observable inputs or available market data to support the fair value. This method of valuation involves using inputs such as the fair value of the Company’s common stock, stock price volatility, expected future financings, risk–free interest rates and dividend yields. Due to the nature of these inputs, the valuation of future potential dilutive financings is considered a Level 3 measurement.

From April 8, 2016, the date of the Common Stock Issuance Agreement ("CSIA") through December 31, 2016, the Company raised capital from the issuance of common stock and related warrants for gross proceeds of approximately $9.0 million that were dilutive in accordance with the provisions of the CSIA agreement. The Company issued 75,020 shares in June 2016 to the parties of the CSIA and the Company became obligated to issue additional common shares to the parties to the CSIA in connection with a financing transaction completed by the Company in November 2016. As of December 31, 2016, the maximum number of shares that the Company could issue under the rules of the NYSE MKT and the terms of the CSIA agreement was 28,684 shares. This maximum number of shares did not change during the three months ended March 31, 2017. As of December 31, 2016, the dilutive financing liability was valued at $126,000, based on the closing market price of the Company's common stock of $4.40 per share multiplied by the 28,684 shares available to be issued. As of the March 31, 2017, the dilutive financing liability was valued at $123,000, based on the closing market price of the Company's common stock of $4.30 per share multiplied by the 28,684 shares available to be issued.

In connection with an issuance of warrants exercisable for an aggregate of 533,500 shares of common stock under a registered public offering, the Company incurred the November 2016 offering warrant liability (see Note 8). The fair value of the November 2016 offering warrant liability on the date of issuance and on each re-measurement date was estimated using the Monte Carlo valuation model. This method of valuation involves using inputs such as the fair value of the Company's common stock, stock price volatility, contractual term of the warrants, risk–free interest rates and dividend yields. Due to the nature of these inputs, the valuation of the warrants is considered a Level 3 measurement. The assumptions used consisted of the following:

	March 31, 2017		December 31, 2016	
Volatility	112	%	112	%
Expected term (years)	4.64		4.89	
Risk-free interest rate	1.85	%	1.91	%
Dividend yield	0.00	%	0.00	%
Exercise price (1)	$ 7.50		$ 7.50	
Common stock closing price	$ 4.30		$ 4.40	

(1) The exercise price of the November 2016 offering warrants will be adjusted downward due to events subsequent to March 31, 2017 (see Note 8).

As of March 31, 2017, all of the Company's derivative liabilities were marked-to-market with the changes in fair value recorded as a component of change in fair value of derivative liabilities on the Company's consolidated statements of operations.

5. Net Loss per Common Share

The following table sets forth the computation of basic and diluted net loss per common share for the periods indicated:

	Three Months Ended March 31,	
	2017	2016
Basic and diluted net loss per common share calculation:		
Net loss	$(3,246,000)	$(3,112,000)
Accretion of Series B redeemable convertible preferred stock	-	(1,725,000)
Net loss attributable to common stockholders - basic & diluted	$(3,246,000)	$(4,837,000)
Weighted average common shares outstanding - basic & diluted	1,677,497	588,350

Net loss per share of common stock - basic & diluted	$(1.94)	$(8.22)

The following outstanding securities at March 31, 2017 and 2016 have been excluded from the computation of diluted weighted average shares outstanding for the three months ended March 31, 2017 and 2016, as they would have been anti-dilutive:

	Three Months Ended March 31,	
	2017	2016
Options	120,360	87,297
Warrants	775,137	137,964
Series B redeemable convertible preferred stock	-	752,785
Total	895,497	978,046

6. Redeemable Convertible Preferred Stock

On June 13, 2013, the Company's Board of Directors approved a resolution designating 9,357,935 shares of Preferred Stock as Series B redeemable convertible preferred stock (Series B) with an initial stated value of $1.40 and par value of $0.01 per share. As of April 7, 2016, each Series B share was convertible into 0.02 shares of common stock and was entitled to the number of votes equal to the number of shares of common stock into which such Series B share could be converted. The Series B shares were convertible into common stock by the holder of the shares at any time. The Series B shares were subject to automatic conversion into common stock upon the election of the holders of at least two-thirds of the outstanding Series B shares. In addition, pursuant to the Company's Articles of Incorporation, the Series B shares were automatically convertible into common stock upon the occurrence of an underwritten initial public offering by the Company that satisfied certain conditions. Holders of the Series B shares were entitled to receive cumulative, cash dividends at the rate of 10% of the Series B stated value. Such dividends accrued from day-to-day commencing on the original issue date, whether or not earned or declared by the Board of Directors, and were compounded annually. The Series B shares were redeemable by the Company at any time on or after June 26, 2018, upon the election of the holders of at least two-thirds of the outstanding Series B shares for an amount equal to the original issue price per share plus any accrued and unpaid dividends. Holders of the Series B shares were entitled to a liquidation preference in an amount equal to the Series B stated value of $1.40 per share plus all accrued and unpaid dividends in the event of a liquidation, dissolution, or winding-up of the Company, or in the event of a merger or acquisition of the Company. In connection with the private placement of Series B shares, the Company recorded a liability for an embedded derivative that required bifurcation under the applicable accounting guidance. The embedded derivative included a redemption feature, multiple dividend features, as well as multiple conversion features with specified anti-dilution adjustments for certain financing transactions involving the issuance of securities at a price below a minimum issuance price of $70.00 per share.

From December 31, 2015 to April 7, 2016, the Company had accreted $1,858,000 from additional paid-in capital to Series B redeemable convertible preferred stock to adjust the redemption value of the Series B.

On April 8, 2016, certain holders of over two-thirds of the Company's then-outstanding shares of the Series B stock (the "Holders") elected to automatically convert all outstanding shares of Series B into shares of common stock in accordance with Section 4.4.4(b)(ii) of the Company's Amended and Restated Articles of Incorporation (the "Conversion"). As a result of the Conversion, the 7,527,853 shares of Series B outstanding as of immediately prior to the Conversion were converted into an aggregate of 150,556 shares of common stock.

On April 8, 2016, the Company entered into the CSIA with the Holders pursuant to which the Company agreed to issue the Holders an aggregate of 85,346 shares of the Company's common stock. Pursuant to the CSIA, the Company and the Holders also agreed to amend the common stock warrants previously issued to the Holders in June 2013 in order to reduce the exercise price of such warrants from $70.00 per share to $40.50 per share and extend the expiration date thereof from June 26, 2018 to March 31, 2021 (the "Warrant Amendments"). As consideration for the shares and the Warrant Amendments, the Holders waived their right to receive approximately $2.2 million in aggregate cash

payments to which they were entitled upon the Conversion in respect of accrued dividends on their former shares of Series B. The Holders also waived their registration rights with respect to certain future registration statements that may be filed, and certain future public offerings that may be conducted, by the Company. The transaction was accounted for based on the difference between the fair value of the consideration transferred to the Holders of the preferred stock and the carrying amount of the preferred stock on April 7, 2016.

The terms of the CSIA provide that if, after the date of the CSIA, the Company conducts one or more bona fide equity financings in which it sells shares of common stock or preferred stock at a price less than $40.50 per share (each, a "dilutive financing"), the Company will be required to issue to the Holders additional shares of common stock based on a specified formula until the obligation expires. The obligation to issue additional shares in the event of any such dilutive financing (i) only applies to the lowest priced financing conducted after the date of the CSIA, (ii) is subject to limitations under applicable NYSE MKT rules relating to the issuance of additional shares in a private placement at a price less than the greater of book or market value and (iii) will expire at such time the Company has raised $10.0 million in gross proceeds from the sale of common stock and/or preferred stock in a bona fide financing or financings or June 30, 2018, whichever occurs first.

On June 3, 2016, the Company completed a registered public offering of shares of common stock and warrants at a combined per share purchase price of $23.50, resulting in aggregate gross proceeds of $5.0 million. On November 22, 2016, the Company completed an additional underwritten public offering of common stock and warrants at a combined per share purchase price of $7.50, for gross proceeds of approximately $4.0 million (see Note 8). These two offerings qualified as dilutive financings under the terms of the CSIA.

On June 20, 2016, the Company obtained stockholder approval for the issuance of up to 103,705 shares of common stock to the Holders to the extent required by the terms of the CSIA in connection with one or more dilutive financings completed subsequent to the agreement date. Subsequent to the June and November 2016 financings and as of December 31, 2016, the maximum number of shares the Company could issue to the Holders pursuant to a future dilutive financing was 28,684 shares under the rules of the NYSE MKT. This maximum number of shares did not change during the three months ended March 31, 2017. The Company may be contractually required to issue additional shares for no consideration in excess of the maximum number of shares it is currently permitted to issue under the rules of the NYSE MKT.

Prior to the completion of the Company's May 2017 public offering, the CSIA required the delivery of shares in the event of a future dilutive financing. The Company determined this was a conditional forward contract and recorded a derivative liability as of April 8, 2016 in the amount of $2.3 million for potential future dilutive financings. On June 3, 2016, the future financing derivative liability was adjusted by the fair value of the dilutive shares issuable of $1.5 million as a result of the June offering. In November 2016, the Company completed a registered public offering of common stock and warrants to purchase common stock at a price of $7.50 per share and accompanying warrant. In May 2017, the Company completed a public offering of common stock and warrants to purchase common stock, at a price of $1.49 per share of common stock and $0.01 per accompanying warrant. As a result of the November 2016 and May 2017 public offerings, the Holders may claim that we have an obligation to issue them, pursuant to the formula under the CSIA, in the aggregate, 552,169 shares of common stock: 222,407 shares as a result of the November 2016 public offering and 329,762 shares as a result of the May 2017 public offering. However, under section 713(a) of the NYSE MKT Company Guide, we are only permitted to issue 28,684 shares to the Holders without further stockholder

approval. As of the date of this report, no shares of common stock have been issued to the Holders in connection with the November 2016 public offering or the May 2017 public offering.

The dilutive financing derivative liability was marked-to-market at $123,000 as of March 31, 2017, with the decrease in fair value of $3,000 recorded as a component of change in fair value of derivative liabilities in the Company's consolidated statements of operations (see Note 4) for the three months ended March 31, 2017.

The March 31, 2017 consolidated balance sheet reflects dividends payable of $38,000 to former holders of preferred stock, which are classified as current liabilities.

7. Warrants

On January 4, 2016, the Company entered into an Asset Purchase Agreement with Novolytics Limited to purchase certain preclinical materials and intangible assets, including patent rights. In consideration for the assets acquired, the Company paid cash consideration of approximately $205,000 and issued warrants to purchase an aggregate of 17,000 shares of the Company' common stock. During the three months ended March 31, 2016, the Company expensed the total value provided for the acquired assets of $409,000, which included warrants with a fair market value of $204,000, to in-process research and development.

There were no warrants issued or exercised during the three months ended March 31, 2017. The following table provides a summary of warrants outstanding.

	$7.50		**$22.50**		**$40.50 - $82.50**		**$107.50 - $120.00**		**Totals**	
	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Balance at March 31, 2017	533,500	$7.50	106,383	$22.50	69,406	$58.16	65,848	$110.73	775,137	$22.86

8. Stockholders' Equity

On May 31, 2016, the Company entered into a Securities Purchase Agreement (the "SPA") with certain purchasers providing for the sale and issuance in a registered public offering of an aggregate of 212,766 shares of the Company's common stock and warrants to purchase 106,383 shares of the Company's common stock. Each share of common stock was sold together with a warrant to purchase 0.50 of a share of common stock at a combined purchase price of $23.50 per unit, for aggregate gross proceeds to the Company of $5.0 million. The offering closed on June 3, 2016.

The warrants have an exercise price of $22.50 per share, were exercisable immediately upon issuance and expire five years following the date of issuance. The Company received net proceeds from the offering of approximately $4.2 million after deducting placement agent fees and other offering expenses payable by the Company.

The Company evaluated the warrants issued in the offering and determined the warrant instruments should be classified as a liability due to certain net cash settlement provisions in the warrant agreement. The Company recorded a derivative liability for the estimated fair value of the warrants issued in connection with the offering in the amount of $1.8 million (based on a Black-Scholes Option Pricing Model assuming no dividend yield, volatility of 123%, and a risk-free interest rate of 1.23%). The remaining balance of $3.2 million, after deducting the fair value of the warrants, was allocated to the value of the common stock. Offering costs directly allocable to the offering totaled $0.8 million, including placement agent fees and legal expenses. Of this amount, $0.2 million was allocable to the warrants and recorded as other expense in the Company’s consolidated statement of operations for the year ended December 31, 2016 based on the relative fair value of the warrants to the common stock. The derivative liability for the warrants was marked-to-market at $245,000 as of March 31, 2017, with the decrease in fair value of $29,000 recorded as a component of change in fair value of derivative liabilities in the Company’s statement of operations (see Note 4) for the three months ended March 31, 2017.

On November 22, 2016, the Company completed an underwritten public offering of 533,500 shares of its common stock and warrants to purchase up to an aggregate of 533,500 shares of common stock. Each share of common stock was sold together with a warrant to purchase one share of common stock at a combined purchase price of $7.50 per unit, for aggregate gross proceeds to the Company of $4.0 million. The warrants have an exercise price of $7.50 per share, were exercisable immediately upon issuance and expire five years following the date of issuance. The net proceeds to the Company from the offering of approximately $3.3 million after deducting placement agent fees and other offering expenses payable by the Company.

The Company evaluated the warrants issued in the offering and determined the warrant instruments should be accounted for as a liability primarily because the warrant is not indexed to the Company's common stock due to exercise price adjustment provision and the Company may be required to pay the warrant holders cash under certain circumstances. The Company recorded a derivative liability for the estimated fair value of the warrants issued in connection with the offering in the amount of $2.9 million, based on a valuation using the Monte Carlo valuation model. The remaining balance of $1.1 million, after deducting the fair value of the warrants, was allocated to the value of the common stock. Offering costs directly allocable to the offering totaled $0.7 million, including underwriting discounts and commissions and legal expenses. Of this amount, $0.3 million was allocable to the warrants and recorded as other expense in the Company's consolidated statements of operations based on the relative fair value of the warrants to the common stock. The derivative liability for the warrants was marked-to-market at $1,961,000 as of March 31, 2017, with the decrease in fair value of $82,000 recorded as a component of change in fair value of derivative liabilities in the Company's consolidated statement of operations (see Note 4) for the three months ended March 31, 2017.

The $7.50 exercise price of the 533,500 shares of common stock issuable upon exercise of outstanding warrants will be adjusted in connection with the Company's April 2017 1-for-10 reverse stock split. Under the terms of the November 2016 warrants, following a reverse stock split, on the 16th trading day immediately following such reverse stock split, or May 16, 2017, the exercise price of the November 2016 warrants will be reduced to the lowest volume-weighted average price between and including April 25, 2017 and May 15, 2017.

There were no issuances of common stock during the three months ended March 31, 2017.

9. Stock-Based Compensation

Stock Option Plan

In June 2016, the Company's stockholders approved the 2016 Equity Incentive Plan (the 2016 Plan). The 2016 Plan provides for the issuance of incentive awards in the form of non-qualified and incentive stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards and performance-based stock awards. The awards may be granted by the Company's Board of Directors to its employees, directors and officers and to consultants, agents, advisors and independent contractors who provide services to the Company or to a subsidiary of the Company. The exercise price for stock options must not be less than the fair market value of the underlying shares on the date of grant. Stock options expire no later than ten years from the date of grant and generally vest and typically become exercisable over a four-year period following the date of grant. Upon the exercise of stock options, the Company issues the resulting shares from shares reserved for issuance under the 2016 Plan. With the approval of the 2016 Plan, the remaining unallocated shares under the Company's 2013 Stock Incentive Plan were allocated to the 2016 Plan and an additional 100,000 new shares were added to the authorized share reserve under the 2016 Plan.

Under the 2016 Plan, the number of shares authorized for issuance automatically increases annually beginning January 1, 2017 and through January 1, 2026. On January 1, 2017, the number of shares reserved for future issuance was automatically increased by 82,440 common shares.

Share-based Compensation

The Company estimates the fair value of stock options with performance and service conditions using a Black-Scholes option valuation model. The assumptions used in the Black-Scholes option pricing model are presented below:

	Three Months Ended March 31,			
	2017		2016	
Risk-free interest rate	2.10 to 2.38	%	1.58 to 1.63	%
Expected volatility	116 to 118	%	113	%
Expected term (years)	6.0 to 9.8		6.0	
Expected dividend yield	0	%	0	%

The table below summarizes the total stock-based compensation expense included in the Company's consolidated statements of operations for the periods presented:

	Three Months Ended March 31,	
	2017	2016
Research and development	$ 28,000	$ 26,000
General and administrative	143,000	790,000
Total stock-based compensation	$ 171,000	$ 816,000

Stock option transactions during the three months ended March 31, 2017 are presented below:

	Options Outstanding			
	Shares	Weighted Average Exercise Price	Average Remaining Contractual Term (Years)	Intrinsic Value
Balance, December 31, 2016	74,890	$ 64.50	8.65	$ -
Granted	46,732	4.50	-	-
Exercised	-	-	-	-
Forfeited/Cancelled	(1,262)	28.60	-	-
Balance, March 31, 2017	120,360	$ 41.60	8.95	$ -
Exercisable at March 31, 2017	39,766	$ 78.00	8.13	$ -

The intrinsic value of options exercisable as of March 31, 2017 was $0, based on the Company's closing stock price of $4.30 per share and the exercise price of the options. As of March 31, 2017, there was $1.6 million of total unrecognized compensation expense related to unvested stock options, which the Company expects to recognize over the weighted average remaining period of 2.5 years.

Shares Reserved For Future Issuance

As of March 31, 2017, the Company had reserved shares of its common stock for future issuance as follows:

	Shares Reserved
Stock options outstanding	120,360
Employee stock purchase plan	25,215
Available for future grants under the 2016 Plan	200,987
Warrants	775,137
Total shares reserved	1,121,699

As of March 31, 2017, the Company was obligated under the CSIA agreement and permitted to issue under the NYSE MKT rules to issue an aggregate of 28,684 shares of common stock to the Holders (see Note 6) for no additional consideration.

Employee Stock Purchase Plan (ESPP)

On June 20, 2016, the Company's stockholders approved the Company's 2016 Employee Stock Purchase Plan (the "ESPP"). The ESPP allows eligible employees to purchase shares of the Company's common stock on a voluntary basis. The shares are sold to participants at a price equal to the lesser of 85% of the fair market value of the Company's common stock at the (i) beginning of the offering period, or (ii) end of the six-month purchase period. The ESPP provides for four six-month purchase periods during each 24 month term. The initial shares provided for under the plan are 12,000, and automatically increase annually as allowed for under the ESPP, beginning January 1, 2017 and through January 1, 2026. On January 1, 2017, the number of shares of common stock reserved for issuance under the ESPP was automatically increased by 16,488 common shares.

During the three months ended March 31, 2017, there were no shares issued under the ESPP and the Company recognized $3,000 in compensation expenses related to the ESPP.

10. Collaborative Agreements

In June 2013, the Company entered into a Collaborative Research and Development Agreement with the United States Army Medical Research and Materiel Command and the Walter Reed Army Institute of Research. The Collaborative Research and Development Agreement is focused on developing and commercializing bacteriophage therapeutics to treat *S. aureus* infections. During the three months ended March 31, 2017 and 2016, the Company incurred no expense related to the Walter Reed Army Institute of Research under the Collaborative Research and Development Agreement.

In 2013, the Company entered into collaboration agreements with the University of Leicester and the University of Glasgow. Under these agreements, which are referred to collectively as the Leicester Development Agreements, the Company provided payments to carry out research on the University of Leicester's development of a bacteriophage therapeutic to resolve *C. difficile* infections. During the three months ended March 31, 2017 and 2016, the Company recorded $97,000 and $43,000 respectively, in research and development expenses related to the University of Leicester under the Leicester Development Agreements. During the three months ended March 31, 2017 and 2016, the Company recognized no expense related to the University of Glasgow under the Leicester Development Agreements.

In March 2017, the Company provided the required 180 days' notice to terminate the Leicester Development Agreement. In April 2017, the University of Leicester provided the Company with notice that it intends to terminate the license agreement as a result of its determination that the Company has not continued to make substantial commercial progress in relation to the technology licensed to the Company under the agreement. Under the license agreement, the Company has the right to enter in good faith discussion with the University of Leicester to identify feasible next steps to remedy the perceived lack of commercial progress prior to a termination of the license agreement on such basis. The licensed rights relate to bacteriophage therapeutic products for the treatment of *C. difficile*.

11. Commitments and Contingencies

From time to time, we may be involved in disputes, including litigation, relating to claims arising out of operations in the normal course of business. Any of these claims could subject us to costly legal expenses and, while we generally believe that we have adequate insurance to cover many different types of liabilities, our insurance carriers may deny coverage or our policy limits may be inadequate to fully satisfy any damage awards or settlements. If this were to happen, the payment of any such awards could have a material adverse effect on our consolidated results of operations and financial position. Additionally, any such claims, whether or not successful, could damage our reputation and business. We currently are not a party to any legal proceedings, the adverse outcome of which, in management's opinion, individually or in the aggregate, would have a material adverse effect on our consolidated results of operations or financial position.

12. Subsequent Events

On May 10, 2017, the Company completed an underwritten public offering and sold 2,584,085 shares of its common stock and 4,483,334 pre-funded warrants to purchase common stock in lieu thereof, including 110,897 shares of common stock sold pursuant to the underwriter's partial exercise of its over-allotment option, and common warrants to purchase 8,000,000 shares of common stock, including common warrants to purchase up to 1,043,478 shares of common stock sold pursuant to the underwriter's full exercise of the over-allotment option to purchase additional common warrants. The price to the public for each share of common stock sold in the offering was $1.49, $1.48 for each pre-funded warrant and $0.01 for each common warrant. Each pre-funded warrant is exercisable for one share of common stock at an exercise price of $0.01 per share. The common warrants are immediately exercisable at a price of $1.50 per share of common stock, and will expire five years from the date of issuance. The Company received net proceeds of $9.1 million, after deducting the underwriting discount and commissions and other estimated offering expenses payable by the Company.

On April 1, 2017, the Company amended its offer letter agreements with the Company's Chief Executive Officer, Chief Operating Officer and Chief Financial Officer. The offer letter amendments were entered into for cautionary

purposes to limit the Company's potential severance obligations, in order to provide the Company with additional near term operating flexibility by waiving certain severance benefits in exchange for stock options and eligibility to receive cash bonuses upon successful completion of near-term financings.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our unaudited consolidated financial statements and related notes included in this Quarterly Report on Form 10-Q, and the audited financial statements and notes thereto as of and for the year ended December 31, 2016 included in our Annual Report on Form 10-K filed with the SEC.

Statements contained in this report that are not statements of historical fact are forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. Such forward-looking statements include, without limitation, statements concerning product development plans, the use of bacteriophages to kill bacterial pathogens, having resources sufficient to fund our operations until the end of the second quarter of 2018, future funding sources, general and administrative expenses, clinical trial and other research and development expenses, capital expenditures, the expectation that recent operational changes will reduce cash expenditures in 2017 and support the Company's strategic emphasis on personalized phage therapies, the expected benefits of our recently announced personalized phage therapies strategy, the expected receipt of a tax rebate from the Australian tax authority, tax credits and carry-forwards, and additional financings and litigation-related matters. Words such as "believe," "anticipate," "plan," "expect," "intend," "will," "goal," "potential" and similar expressions are intended to identify forward-looking statements, though not all forward-looking statements necessarily contain these identifying words. These statements are subject to risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth below under Part II, Item 1A, "Risk Factors" and elsewhere in this Quarterly Report on Form 10-Q. These forward-looking statements speak only as of the date on which they were made, and we undertake no obligation to update any forward-looking statements.

Overview

We are a biotechnology company focused on the discovery, development and commercialization of novel phage therapeutics. Phage therapeutics use bacteriophages, a family of viruses, to kill pathogenic bacteria. Phages have powerful and highly selective mechanisms of action that permit them to target and kill specific bacteria. We believe that phages represent a promising means to treat bacterial infections, especially those that have developed resistance to current therapies, including the so-called multi-drug-resistant or "superbug" strains of bacteria.

The extensive use of antibiotics since the beginning of the modern antibiotics era in the 1940s has resulted in drug resistance among many disease-causing bacteria. According to the U.S. Centers for Disease Control and Prevention, or CDC, resistance to antibiotics threatens to reverse many of the key medical advances of the last half-century. Examples of clinically important microbes that are rapidly developing resistance to available antimicrobials include

bacteria that cause skin, bone, lung and bloodstream infections (e.g., *Staphylococcus aureus,* or *S. aureus* and methicillin-resistant *S. aureus*, or MRSA), pneumonia and lung infections in both community and hospital settings and cystic fibrosis, or CF, patients (e.g., *A. baumanii, P. aeruginosa,* and *K. pneumoniae*), meningitis (e.g., *S. pneumonia*), urinary tract and gastrointestinal infections (e.g., *E. coli* and *C. difficile*). As phages kill bacteria in ways entirely unlike the mechanisms used by traditional antibiotics, we believe that most multi-drug resistant bacteria will be susceptible to phage therapy. Furthermore, should resistant bacteria emerge or evolve, we believe it will remain possible to identify phages that can effectively kill these resistant bacteria.

Our goal is to be the leading developer of phage therapeutics. We are combining our expertise in the manufacture of drug-quality bacteriophages and our proprietary approach and expertise in identifying, characterizing and developing naturally occurring bacteriophages with that of collaboration partners in bacteriophage biology, synthetic biology and manufacturing, to develop state-of-the-art bacteriophage products. We are developing phage products to combat multi- or pan-drug-resistant bacterial pathogens, leveraging advances in sequencing and molecular biology. We have developed certain phage combinations that we believe maximize efficacy and minimize phage resistance. We currently have product candidates for the treatment of *S. aureus* infections, including MRSA, *P. aeruginosa* infections, and *C. difficile* infections. We intend to seek to advance our chronic rhinosinusitis, or CRS, program and preclinical CF, program through partnerships, arrangements and/or with additional outside funding. In April 2017, the U.S. Food and Drug Administration, or FDA, provided positive feedback on our previously submitted detailed development proposal to commence a Phase 2 trial with our proprietary bacteriophage cocktail AB-SA01 for the treatment of antibiotic-resistant *S. aureus* infections in patients with CRS, which feedback followed a Type B telephonic meeting held with us on February 21, 2017. In the official minutes from the meeting, the FDA acknowledged that phage therapy is an exciting approach to treatment of multi-drug-resistant organisms and expressed a commitment to addressing the unique regulatory challenges that might arise during product development.

We have generally incurred net losses since our inception and our operations to date have been primarily limited to research and development and raising capital. Since the shift in our focus to novel therapeutics in February 2011 through March 31, 2017, we have received approximately $52.6 million in gross proceeds from the issuance of our equity securities and convertible debt securities. As of March 31, 2017, we had an accumulated deficit of $384.6 million, $69.1 million of which has been accumulated since January of 2011, when our company began its focus on bacteriophage development. We anticipate that a substantial portion of our capital resources and efforts in the foreseeable future will be focused on completing the development and obtaining regulatory approval of our product candidates.

We currently expect to use our existing cash and cash equivalents for the continued research and development of our product candidates, including through our recently announced personalized phage therapies strategy, and for working capital and other general corporate purposes.

We expect to continue to incur significant and increasing operating losses at least for the next several years. We do not expect to generate product revenue unless and until we successfully complete development and obtain marketing approval for at least one of our product candidates.

We may also use a portion of our existing cash and cash equivalents for the potential acquisition of, or investment in, product candidates, technologies, formulations or companies that complement our business, although we have no current understandings, commitments or agreements to do so. Our existing cash and cash equivalents will not be sufficient to enable us to complete all necessary development of any potential product candidates. Accordingly, we will be required to obtain further funding through one or more other public or private equity offerings, debt financings, collaboration or licensing arrangements or other sources. Adequate additional funding may not be available to us on acceptable terms, or at all. If we are unable to raise capital when needed or on acceptable terms, we may be required to defer, reduce or eliminate significant planned expenditures, restructure, curtail or eliminate some or all of our development programs or other operations, dispose of assets, enter into arrangements that may require us to relinquish rights to certain of our product candidates, technologies or potential markets, file for bankruptcy or cease operations altogether. Any of these events could have a material adverse effect on our business, financial condition and results of operations and result in a loss of investment by our stockholders.

Recent Events

On April 14, 2017, our board of directors approved (i) a 1-for-10 reverse split of our outstanding common stock and (ii) a corresponding, proportional reduction in the number of our authorized shares of common stock, which became effective on April 24, 2017, pursuant to the filing of Articles of Amendment to our Articles of Incorporation with the Secretary of State of the State of Washington. As a result of the reverse stock split, proportionate adjustments were made to the per share exercise price and the number of shares issuable upon the exercise of all stock options and warrants issued by us and outstanding, which resulted in a proportionate decrease in the number of shares of our common stock reserved for issuance upon exercise of such stock options and warrants and a proportionate increase in the exercise price of all such stock options and warrants. In addition, the number of shares authorized for future grant under our equity incentive and compensation plans was reduced proportionately. Our common stock began trading on the NYSE MKT on a split-adjusted basis at market open on April 25, 2017. All common share and per common share information that is presented as of a date prior to the reverse stock split have been adjusted to give retroactive effect to the reverse stock split.

We believe our bacteriophage technology may have unique application in the area of personalized medicine, and in April 2017, we announced a new strategic emphasis on personalized therapies for serious or life-threatening antibiotic-resistant infections. In particular, we believe our bacteriophage technology can be used to develop personalized, targeted therapies for patients who suffer from serious or life-threatening antibiotic-resistant bacterial infections and who have limited or no other satisfactory treatment options. Moreover, we believe our ability to customize phage therapies for antibiotic-resistant infections, combined with the ability of bacteriophage to re-sensitize drug-resistant populations to antibiotics, represents what could be a powerful tool against the growing challenge of

antibiotic-resistant infections. We have commenced a focused effort to develop precisely targeted and personalized bacteriophage therapies aimed at addressing the unmet medical need of serious or life-threatening antibiotic-resistant infections.

Under existing compassionate-use guidelines, we expect to provide personalized phage therapies to patients suffering from severe, multi-drug-resistant, or MDR, infections who have failed prior therapies. We believe this strategic approach will not only provide potential benefit to patients to whom we are able to provide personalized phage therapies under the compassionate-use guidelines, but also provide the clinical data from these compassionate use cases that we expect to support the potential validation of the clinical utility of phage therapy and inform our future discussions with the FDA in 2018 or later on defining a potential path to market approval. We anticipate that we will initially make personalized phage therapies available in Australia, where we plan to collaborate with leading hospitals and key opinion leaders to identify and select eligible patients. We believe Australia has a favorable regulatory framework with respect to treating patients under compassionate use guidelines.

Our new emphasis on personalized medicine builds upon our prior successes using tailored bacteriophage therapies under emergency investigational new drug applications to treat individual patients battling life-threatening, MDR bacterial pathogens who had exhausted their treatment options. In March 2016 we collaborated with several academic institutions and a U.S. Navy laboratory to produce a personalized bacteriophage therapy that successfully treated a critically ill, comatose patient with an MDR *Acinetobacter baumannii* (*A. baumannii*) infection. Shortly after phage therapy was initiated, the patient emerged from the coma and continued to improve under an ongoing combination of phage and antibiotic therapies until the infection was cleared. To date, the infection has not returned. Additionally, in December 2007 our wholly owned subsidiary, Special Phage Services, was instrumental in developing a personalized phage therapy that, together with a course of antibiotics, eliminated a previously antibiotic-resistant *Pseudomonas aeruginosa* (*P. aeruginosa*) infection in the bladder of a female cancer patient.

On May 10, 2017, we completed an underwritten public offering and sold 2,584,085 shares of our common stock and 4,483,334 pre-funded warrants to purchase common stock in lieu thereof, including 110,897 shares of common stock sold pursuant to the underwriter’s partial exercise of its over-allotment option, and common warrants to purchase 8,000,000 shares of common stock, including common warrants to purchase up to 1,043,478 shares of common stock sold pursuant to the underwriter’s full exercise of the over-allotment option to purchase additional common warrants. The price to the public for each share of common stock sold in the offering was $1.49, $1.48 for each pre-funded warrant and $0.01 for each common warrant. Each pre-funded warrant is exercisable for one share of common stock at an exercise price of $0.01 per share. The common warrants are immediately exercisable at a price of $1.50 per share of common stock, and will expire five years from the date of issuance. We received net proceeds of $9.1 million, after deducting the underwriting discount and commissions and other estimated offering expenses payable by us.

Results of Operations

Comparison of Three Months Ended March 31, 2017 and 2016

Revenue

For the three months ended March 31, 2017 and 2016, we recognized $29,000 and $106,000, respectively, in revenue related to our former gene therapy program.

Research and Development

Research and development expenses for the quarter ended March 31, 2017 totaled $1.5 million compared to $2.0 million for the same period of 2016. The decrease of $0.5 million was primarily related to approximately $0.4 million of expense recorded in connection with assets acquired from Novolytics in 2016.

General and Administrative

General and administrative expenses for the quarter ended March 31, 2017 were $1.9 million compared to $2.6 million for the same period of 2016. The $0.7 million decrease was attributable to a $0.5 million decrease in compensation primarily related to non-cash stock-based compensation and $0.2 million for legal fees and professional recruitment fees.

Other Income (Expense)

We recorded a gain of $114,000 for the three months ended March 31, 2017 related to the change in the fair value of our derivative liabilities. The gain was the result of a $111,000 gain related to the change in fair value of our derivative liability for warrants issued in June and November 2016 and a gain of $3,000 related to the change in fair value of our dilutive financing derivative liability.

We recorded a gain of $1.4 million for the three months ended March 31, 2016 related to the change to the fair value of our Series B preferred stock derivative liability. This gain was primarily attributable to a decrease in the estimated term of the derivative liability associated with the Series B preferred stock at March 31, 2016.

Liquidity, Capital Resources and Financial Condition

We have prepared the accompanying consolidated financial statements on a going concern basis, which assumes that we will realize our assets and satisfy out liabilities in the normal course of business. However, we have incurred net losses since our inception, had negative operating cash flows and had an accumulated deficit of $384.6 million as of March 31, 2017, $69.1 million of which has been accumulated since January of 2011, when we began our focus on bacteriophage development. These circumstances could raise substantial doubt about our ability to continue as a going concern. The accompanying financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of the uncertainty concerning our ability to continue as a going concern.

We had cash and cash equivalents of $2.2 million at March 31, 2017. We have made operational changes that are expected to reduce our cash expenditures in 2017 and which we believe will support our strategic emphasis on precisely targeted personalized bacteriophage therapies. In May 2017, we completed an underwritten public offering of common stock, pre-funded warrants and common warrants, resulting in net proceeds to us of approximately $9.1 million. We have filed an Australian tax return for the year 2016 and currently expect receipt of approximately $1.8 million in tax rebate incentive payments from the Australian tax authority in the third quarter of 2017, subject to review of the tax return by Australian tax authorities. There can be no assurance that we will receive such tax rebate when or in the amount we currently anticipate, or at all. We believe our existing cash resources, after taking into account the net proceeds from our May 2017 public offering, will be sufficient to fund our planned operations until the end of the second quarter of 2018. However, we cannot provide assurances that our plans will not change or that changed circumstances will not result in the depletion of our capital resources more rapidly than we currently anticipate.

Operating activities

Net cash used in operating activities for the three months ended March 31, 2017 was $3.3 million, as compared to $3.1 million for the three months ended March 31, 2016. Net loss recorded during the three months ended March 31, 2017 was $3.2 million, inclusive of a $0.1 million non-cash gain on derivative liabilities primarily related to warrants. Net loss recorded during the three months ended March 31, 2016 was $3.1 million, inclusive of a $1.4 million non-cash gain related to the Series B preferred stock derivative liability. Loss from operations decreased from $4.5 million during the three months ended March 31, 2016 to $3.4 million during the three months ended March 31, 2017. The $1.1 million decrease was due to lower non-cash stock-based compensation and professional service costs during the first quarter of 2017 and one-time expenses related to assets acquired from Novolytics during the first quarter of 2016.

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Investing activities

Net cash used in investing activities was $5,000 and $112,000 for the three months ended March 31, 2017 and 2016, respectively, and was primarily attributable to purchases of property and equipment.

Financing activities

Net cash used in financing activities was $205,000 for the three months ended March 31, 2017 and related to a payment on a note payable with an insurance carrier. There were no financing activities for the three months ended March 31, 2016.

Future Capital Requirements

We will need to raise additional capital to continue to fund our future operations. Our future funding requirements will depend on many factors, including:

- the costs and timing of our research and development activities;
- the progress and cost of our clinical trials and other research and development activities;
- manufacturing costs associated with our personalized phage therapies strategy and other research and development activities;
- the terms and timing of any collaborative, licensing, acquisition or other arrangements that we may establish;
- whether and when we receive the expected $1.8 million Australian tax rebate, or other future tax rebates, if any;
- the costs and timing of seeking regulatory approvals;
- the costs of filing, prosecuting and enforcing any patent applications, claims, patents and other intellectual property rights; and
- the costs of lawsuits involving us or our product candidates.

We may seek funds through arrangements with collaborators or others that may require us to relinquish rights to the product candidates that we might otherwise seek to develop or commercialize independently. We cannot be certain that we will be able to enter into any such arrangements on reasonable terms, if at all.

We may seek to raise capital through a variety of sources, including:

- the public equity market;
- private equity financings;
- collaborative arrangements;
- licensing arrangements; and/or
- public or private debt.

Any additional fundraising efforts may divert our management team from their day to day activities, which may adversely affect our ability to develop and commercialize our product candidates. Our ability to raise additional funds will depend, in part, on the success of our product development activities, including our personalized phage therapies strategy and any clinical trials we initiate, regulatory events, our ability to identify and enter into in-licensing or other strategic arrangements, and other events or conditions that may affect our value or prospects, as well as factors related to financial, economic and market conditions, many of which are beyond our control. We cannot be certain that sufficient funds will be available to us when required or on acceptable terms. If we are unable to secure additional funds on a timely basis or on acceptable terms we may be required to defer, reduce or eliminate significant planned expenditures, restructure, curtail or eliminate some or all of our development programs or other operations, dispose of technology or assets, pursue an acquisition of our company by a third party at a price that may result in a loss on investment for our stockholders, enter into arrangements that may require us to relinquish rights to certain of our product candidates, technologies or potential markets, file for bankruptcy or cease operations altogether. Any of these events could have a material adverse effect on our business, financial condition and results of operations. Moreover, if we are unable to obtain additional funds on a timely basis, there will be substantial doubt about our ability to continue as a going concern and increased risk of insolvency and loss of investment by our stockholders. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of such securities could result in dilution to our existing stockholders.

Off-Balance Sheet Arrangements

As of March 31, 2017, we did not have off-balance sheet arrangements.

Recent Accounting Pronouncements

Refer to *Note 3* of the condensed consolidated notes to the consolidated financial statements contained elsewhere in this report.

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

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

Item 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), as of the end of the period covered by this report. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed in the reports we file or submit under the Exchange Act is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable and not absolute assurance of achieving the desired control objectives. In reaching a reasonable level of assurance, management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures. In addition, the design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective disclosure controls system, misstatements due to error or fraud may occur and not be detected.

Based on this evaluation, our Chief Executive Officer and Chief Financial Officer, have concluded that our disclosure controls and procedures were not effective at the reasonable assurance level as of the end of the period covered by this report as a result of the material weakness identified in our internal control over financial reporting as of December 31, 2016, as described further below.

Changes in Internal Control Over Financial Reporting

An evaluation was also performed under the supervision and with the participation of our management, including our principal executive officer and our principal financial officer, of any change in our internal control over financial reporting that occurred during our last fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. That evaluation did not identify any change in our internal control over financial reporting that occurred during our latest fiscal quarter and that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting, other than as disclosed below.

Remediation of Material Weakness

As of December 31, 2015, the Company disclosed the following material weakness within its 2015 Form 10-K: “We concluded that we did not maintain adequate and effective internal control in the area of complex and non-routine transactions and in the application of Accounting Standards Codification No. 260, “Earnings Per Share,” or ASC 260 as of December 31, 2015.” Although we made improvements and implemented certain aspects of our remediation plan through December 31, 2016, we did not believe that the applicable remedial controls had operated for a sufficient period of time or number of occurrences to allow for sufficient testing to determine the controls’ operating effectiveness. We also did not believe that our remediation plan had been fully implemented as of December 31, 2016. Accordingly, the identified material weakness remained outstanding.

We continue to review, document and test our internal control over financial reporting. For the three months ended March 31, 2017, we have taken additional steps to remediate those previously identified deficiencies in our internal control over financial reporting in the area of complex and non-routine transactions. We have continued implementation of standardized financial control and reporting processes which have resulted in improvements to our internal control of financial reporting. These remediation actions are being monitored by the Audit Committee of our Board of Directors.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

From time to time, we are a party to certain litigation that is either judged to be not material or that arises in the ordinary course of business. We intend to vigorously defend our interests in these matters. We expect that the resolution of these matters will not have a material adverse effect on our business, financial condition or results of operations. However, due to the uncertainties inherent in litigation, no assurance can be given as to the outcome of these proceedings.

Item 1A. Risk Factors

You should consider carefully the following information about the risks described below, together with the other information contained in this Quarterly Report and in our other public filings in evaluating our business. The risk factors set forth below that are marked with an asterisk (*) did not appear as separate risk factors in, or contain changes to the similarly titled risk factors included in, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2016. If any of the following risks actually occur, our business, financial condition, results of operations, and future growth prospects would likely be materially and adversely affected. In these circumstances, the market price of our common stock would likely decline.

Risks Related to Our Financial Condition and Need for Additional Capital

We will need to raise additional capital to support our operations, which may not be available on acceptable terms, or at all.*

We will need to raise additional capital to support our operations and product development activities. In the near term, we expect to continue to fund our operations, if at all, primarily through equity and debt financings in the future. We may also seek funds through arrangements with collaborators or others that may require us to relinquish rights to the product candidates that we might otherwise seek to develop or commercialize independently. If additional capital is not available to us when needed or on acceptable terms, we may not be able to continue to operate our business pursuant to our business plan or we may have to discontinue our operations entirely. While we believe that our existing resources will be sufficient to fund our planned operations until the end of the second quarter of 2018, we cannot provide assurances that our plans will not change or that changed circumstances will not result in the depletion of our capital resources more rapidly than we currently anticipate.

Developing drugs and conducting clinical trials is expensive. Our future funding requirements will depend on many factors, including:

- the costs and timing of our research and development activities;
- the progress and cost of our clinical trials and other research and development activities;
- manufacturing costs associated with our personalized phage therapies strategy and other research and development activities;
- the terms and timing of any collaborative, licensing, acquisition or other arrangements that we may establish;
- whether and when we receive the expected $1.8 million Australian tax rebate, or other future tax rebates, if any;
- the costs and timing of seeking regulatory approvals;
- the costs of filing, prosecuting, defending and enforcing any patent applications, claims, patents and other intellectual property rights; and
- the costs of lawsuits involving us or our product candidates.

We may seek to raise capital through a variety of sources, including:

- the public equity market;
- private equity financings;
- collaborative arrangements;
- licensing arrangements; and/or
- public or private debt.

Raising additional capital through the sale of securities could cause significant dilution to our stockholders. Any additional fundraising efforts may divert our management from their day to day activities, which may adversely affect our ability to develop and commercialize our product candidates. Our ability to raise additional funds will depend, in part, on the success of our product development activities, including our personalized phage therapies strategy and any clinical trials we initiate, regulatory events, our ability to identify and enter into in-licensing or other strategic arrangements, and other events or conditions that may affect our value or prospects, as well as factors related to financial, economic and market conditions, many of which are beyond our control. There can be no assurances that sufficient funds will be available to us when required or on acceptable terms, if at all.

If we are unable to secure additional funds when needed or on acceptable terms, we may be required to defer, reduce or eliminate significant planned expenditures, restructure, curtail or eliminate some or all of our development programs or other operations, dispose of technology or assets, pursue an acquisition of our company by a third party at a price that may result in a loss on investment for our stockholders, enter into arrangements that may require us to relinquish rights to certain of our product candidates, technologies or potential markets, file for bankruptcy or cease operations altogether. Any of these events could have a material adverse effect on our business, financial condition and results of operations. Moreover, if we are unable to obtain additional funds on a timely basis, there will be substantial doubt about our ability to continue as a going concern and increased risk of insolvency and up to a total loss of investment by our stockholders.

We have incurred losses since our inception and anticipate that we will continue to incur significant losses for the foreseeable future, and our future profitability is uncertain.*

We have incurred losses in each year since our inception in 1992. As of March 31, 2017, our accumulated deficit was $384.6 million, $69.1 million of which has been accumulated since January of 2011, when we began our focus on bacteriophage development, and we expect to incur losses for the foreseeable future. We have devoted, and will continue to devote for the foreseeable future, substantially all of our resources to research and development of our product candidates. For the three months ended March 31, 2017 and 2016, we had losses from operations of $3.4 million and $4.5 million, respectively. Additional information regarding our results of operations may be found in our consolidated financial statements and in "Management's Discussion and Analysis of Financial Condition and Results of Operations" included Item 2 in this report.

Clinical trials and activities associated with discovery research are costly. We do not expect to generate any revenue from the commercial sales of our product candidates in the near term, and we expect to continue to have significant losses for the foreseeable future.

To attain ongoing profitability, we will need to develop products that receive regulatory approval, and market and sell such products effectively, or rely on other parties to do so. We cannot predict when we will achieve ongoing profitability, if at all. We have never generated revenue from product sales and there is no guarantee that we will be able to do so in the future. If we fail to become profitable, or if we are unable to fund our continuing losses, our business, financial condition and results of operations may be materially adversely impacted and our stock price could decline.

We have never generated any revenue from product sales and may never be profitable.

Our ability to generate meaningful revenue and achieve profitability depends on our ability, and the ability of any third party with which we may partner, to successfully complete the development of, and obtain the regulatory approvals necessary to, commercialize our product candidates. We do not anticipate generating revenues from product sales for the foreseeable future, if ever. If any of our product candidates fail in clinical trials or if any of our product candidates do not gain regulatory approval, or if any of our product candidates, if approved, fail to achieve market acceptance, we may never become profitable. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods. Our ability to generate future revenues from product sales depends heavily on our success in:

- completing research and preclinical and clinical development of our product candidates;
- seeking and obtaining regulatory and marketing approvals for product candidates for which we complete clinical trials;

- developing a sustainable, scalable, reproducible, and transferable manufacturing process for our product candidates;
- launching and commercializing product candidates for which we obtain regulatory and marketing approval, either by establishing a sales force, marketing and distribution infrastructure, or by collaborating with a partner;
- obtaining market acceptance of any approved products;
- addressing any competing technological and market developments;
- implementing additional internal systems and infrastructure, as needed;
- identifying and validating new product candidates;
- negotiating favorable terms in any collaboration, licensing or other arrangements into which we may enter;
- maintaining, protecting and expanding our portfolio of intellectual property rights, including patents, trade secrets and know-how; and
- attracting, hiring and retaining qualified personnel.

Even if one or more of the product candidates that we develop is approved for commercial sale, we anticipate incurring significant costs associated with commercializing any approved product. Our expenses could increase beyond expectations if we are required by the U.S. Food and Drug Administration, or FDA, the European Medicines Agency, or EMA, or other foreign regulatory authorities to perform clinical trials and other studies in addition to those that we currently anticipate. Even if we are able to generate revenues from the sale of any approved products, we may not become profitable and may need to obtain additional funding to continue operations.

Taxing authorities could reallocate our taxable income among our subsidiaries, which could increase our overall tax liability.

We are organized in the United States, and we currently have subsidiaries in the United Kingdom, Australia and Slovenia. If we succeed in growing our business, we expect to conduct increased operations through our subsidiaries in various tax jurisdictions pursuant to transfer pricing arrangements between us and our subsidiaries. If two or more affiliated companies are located in different countries, the tax laws or regulations of each country generally will require that transfer prices be the same as those between unrelated companies dealing at arm's length and that appropriate documentation is maintained to support the transfer prices. While we believe that we operate in compliance with applicable transfer pricing laws and intend to continue to do so, our transfer pricing procedures are

not binding on applicable tax authorities.

If tax authorities in any of these countries were to successfully challenge our transfer prices as not reflecting arm's length transactions, they could require us to adjust our transfer prices and thereby reallocate our income to reflect these revised transfer prices, which could result in a higher tax liability to us. In addition, if the country from which the income is reallocated does not agree with the reallocation, both countries could tax the same income, resulting in double taxation. If tax authorities were to allocate income to a higher tax jurisdiction, subject our income to double taxation or assess interest and penalties, it would increase our consolidated tax liability, which could adversely affect our financial condition, results of operations and cash flows.

Our ability to use our net operating tax loss carryforwards and certain other tax attributes may be limited.*

Our ability to utilize our net operating loss carryforwards, or NOLs, and certain other tax attributes may be limited under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code. These limitations apply if an "ownership change," as defined by Section 382 of the Code, occurs. If we have experienced an "ownership change" at any time since our formation, we may already be subject to limitations on our ability to utilize our existing net operating losses and other tax attributes to offset taxable income. In addition, future changes in our stock ownership (including in connection with future private or public offerings, as well as changes that may be outside of our control), may trigger an "ownership change" and, consequently, limitations under Sections 382 and 383 of the Code. As a result, if we earn net taxable income, our ability to use our pre-change net operating loss carryforwards and other pre-change tax attributes to offset U.S. federal taxable income may be subject to limitations, which could potentially result in increased future tax liability to us. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed. We have not completed a study to assess whether an "ownership change" has occurred or whether there have been multiple "ownership changes" since our formation, due to the complexity and cost associated with such a study, and the fact that we believe there will likely be additional ownership changes in the future. However, we believe there may have been one or more "ownership changes" since our formation, including in connection with our November 2016 and May 2017 public offerings.

If we fail to maintain proper and effective internal control over financial reporting, our ability to produce accurate financial statements on a timely basis could be impaired and our public reporting may be unreliable.

We are required to maintain internal control over financial reporting adequate to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our consolidated financial statements in accordance with generally accepted accounting principles. In connection with the correction of an immaterial error in the third quarter of 2016, and the restatement of our consolidated financial statements for the second quarter of 2015, we determined that we had a material weakness as of December 31, 2016, namely that our internal control over financial reporting, including control over the evaluation and review of complex and non-routine transactions, was not effective. A material weakness means a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of the registrant's annual or interim financial statements will not be prevented or detected on a timely basis.

We do not expect that our internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. Over time, controls may become inadequate because changes in conditions or deterioration in the degree of compliance with policies or procedures may occur. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected. As a result, we cannot assure you that significant deficiencies or material weaknesses in our internal control over financial reporting will not be identified in the future.

We are taking steps to remediate the material weakness in our internal control over financial reporting, including the addition of and training of qualified personnel to identify and evaluate complex and non-routine transactions and the development of specific procedures, processes and internal controls related to complex and non-routine transactions. However, we cannot assure you that these efforts will remediate our material weakness in a timely manner, or at all, or that we will be able to maintain effective controls and procedures even if we remediate our material weakness. If we are unable to successfully remediate our material weakness, implement and maintain effective controls and procedures, or identify any future material weaknesses, the accuracy and timing of our financial reporting may be adversely affected, we may be unable to maintain compliance with securities law requirements regarding timely filing of periodic reports and we may experience a loss of public confidence, which could have an adverse effect on our business, financial condition and the market price of our common stock and other securities.

We incur significant costs as a result of operating as a public company, and our management is required to devote substantial time to compliance initiatives.

As a public company, we incur significant legal, accounting and other expenses. We are subject to the reporting requirements of the Exchange Act, which require, among other things, that we file with the SEC annual, quarterly and current reports with respect to our business and financial condition. In addition, the Sarbanes-Oxley Act, as well as rules subsequently adopted by the SEC and the NYSE MKT to implement provisions of the Sarbanes-Oxley Act, imposes significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Further, in July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, was enacted. There are significant corporate governance and executive compensation related provisions in the Dodd-Frank Act that require the SEC to adopt additional rules and regulations in these areas such as "say on pay" and proxy access. Recent legislation permits emerging growth companies to implement many of these requirements over a longer period and up to five years following their initial public offering. We intend to take advantage of this new legislation but cannot guarantee that we will not be required to implement these requirements sooner than expected and thereby incur unexpected expenses.

We expect the rules and regulations applicable to public companies to result in us continuing to incur substantial legal and financial compliance costs. These costs will decrease our net income or increase our net loss, and may require us to reduce costs in other areas of our business.

Risks Related to Our Business

Results from preclinical studies and Phase 1 or 2 clinical trials of our product candidates or from compassionate-use treatments may not be predictive of the results of later stage clinical trials.*

Preclinical studies, including studies of our product candidates in animal disease models, may not accurately predict the result of human clinical trials of those product candidates. In particular, promising animal studies suggesting the efficacy of prototype phage products in the treatment of bacterial infections, such as *P. aeruginosa* and *S. aureus,* may not predict the ability of these products to treat similar infections in humans. Despite promising data in our completed Phase 1 clinical trials, our phage technology may be found not to be efficacious in treating bacterial infections alone or in combination with other agents, when studied in later-stage clinical trials.

In addition, we have used and plan to continue to use our bacteriophage technology in the area of personalized medicine under compassionate-use guidelines, which permit the use of phage therapy outside of clinical trials, beginning in Australia and then expanding to the United States and potentially other countries. Despite prior compassionate use successes, no assurance can be given that we will have similar compassionate-use treatment successes in the future. Compassionate use is a term that is used to refer to the use of an investigational drug or therapy outside of a clinical trial to treat a patient with a serious or immediately life-threatening disease or condition who has no comparable or satisfactory alternative treatment options. Regulators often allow compassionate use on a case-by-case basis for an individual patient or for defined groups of patients with similar treatment needs. In some countries, such as Australia, the treating physician can administer treatment under compassionate-use guidelines without pre-approval from the applicable regulatory authority.

To satisfy FDA or foreign regulatory approval standards for the commercial sale of our product candidates, we must demonstrate in adequate and controlled clinical trials that our product candidates are safe and effective. Success in early clinical trials, including Phase 1 and Phase 2 trials, or in our compassionate-use program does not ensure that later clinical trials will be successful. Our initial results from early stage clinical trials or our compassionate-use program also may not be confirmed by later analysis or subsequent larger clinical trials. A number of companies in the pharmaceutical industry have suffered significant setbacks in advanced clinical trials, even after obtaining promising results in earlier clinical trials and most product candidates that commence clinical trials are never approved for commercial sale.

Our personalized phage therapies strategy may not be successful, which in turn could adversely affect our business.*

Our personalized phage therapies strategy involves providing phage therapy under compassionate-use guidelines to patients outside of clinical trials with antibiotic-resistant infections who have few or no other therapeutic options. We believe this strategic approach will not only provide potential benefit to patients to whom we are able to provide personalized phage therapies under the compassionate-use guidelines, but also provide the clinical data from these compassionate-use cases that we expect to support the potential validation of the clinical utility of phage therapy and inform our future discussions with the FDA in 2018 or later on defining a potential path to market approval. However, this program is subject to numerous risks and uncertainties, including the following:

- We have not established a cost reimbursement structure or otherwise entered into an arrangement that would at least offset our manufacturing costs for our phage therapies that may be administered to patients under compassionate-use guidelines. Increasing demand for our phage therapies in compassionate-use cases could result in significant costs to us.

- Responding to compassionate-use requests could divert attention of our personnel and use manufacturing resources that could otherwise be deployed in other development program activities.

- Compassionate-use treatment data may not establish proof-of-concept, and the FDA or other regulatory authorities may not accept compassionate-use data as sufficient clinical validation in support of our regulatory approval efforts, which could materially delay and increase the costs of our product development and commercialization activities.

- Patient access to phage therapy will be provided on an individual basis where physicians will make an application or post-treatment notification to the applicable regulatory authorities on a patient-by-patient basis. This can impose a significant administrative burden on participating physicians, who may be resistant to navigating a process with which they are unfamiliar.

We are seeking to develop antibacterial agents using bacteriophage technology, a novel approach, which makes it difficult to predict the time and cost of development. No bacteriophage products have been approved in the United States or elsewhere.

We are developing our product candidates with bacteriophage technology. We have not, nor to our knowledge has any other company, received regulatory approval from the FDA or equivalent foreign agencies for a pharmaceutical drug based on this approach. While *in vitro* studies have characterized the behavior of bacteriophages in cell cultures and there exists a body of literature regarding the use of phage therapy in humans, the safety and efficacy of phage therapy in humans has not been extensively studied in well-controlled modern clinical trials. Most of the prior research on phage-based therapy was conducted in the former Soviet Union prior to and immediately after World War II and lacked appropriate control group design or lacked control groups at all. Furthermore, the standard of care has changed substantially during the ensuing decades since those studies were performed, diminishing the relevance of prior claims of improved cure rates. We cannot be certain that our approach will lead to the development of approvable or marketable drugs.

Developing phage-based therapies on a commercial scale will also require developing new manufacturing processes and techniques. We and our third-party collaborators may experience delays in developing manufacturing capabilities for our product candidates, and may not be able to do so at the scale required to efficiently conduct the clinical trials required to obtain regulatory approval of our product candidates, or to manufacture commercial quantities of our products, if approved.

In addition, the FDA or other regulatory agencies may lack experience in evaluating the safety and efficacy of drugs based on these approaches, which could lengthen the regulatory review process, increase our development costs and delay or prevent commercialization of our product candidates.

Delays in our clinical trials could result in us not achieving anticipated developmental milestones when expected, increased costs and delay our ability to obtain regulatory approval for and commercialize our product candidates.

Delays in our ability to commence or enroll patients for our clinical trials could result in us not meeting anticipated clinical milestones and could materially impact our product development costs and delay regulatory approval of our product candidates. Planned clinical trials may not be commenced or completed on schedule, or at all. Clinical trials can be delayed for a variety of reasons, including:

- delays in the development of manufacturing capabilities for our product candidates to enable their consistent production at clinical trial scale;

- failures in our internal manufacturing operations that result in our inability to consistently and timely produce bacteriophages in sufficient quantities to support our clinical trials;

- the availability of financial resources to commence and complete our planned clinical trials;

- delays in reaching a consensus with clinical investigators on study design;

- delays in reaching a consensus with regulatory agencies on trial design or in obtaining regulatory approval to commence a trial;

- delays in obtaining clinical materials;

- slower than expected patient recruitment for participation in clinical trials;

- failure by clinical trial sites, other third parties, or us to adhere to clinical trial agreements;

- delays in reaching agreement on acceptable clinical trial agreement terms with prospective sites or obtaining institutional review board approval; and

- adverse safety events experienced during our clinical trials.

If we do not successfully commence or complete our clinical trials on schedule, the price of our common stock may decline.

Completion of clinical trials depends, among other things, on our ability to enroll a sufficient number of patients, which is a function of many factors, including:

- the therapeutic endpoints chosen for evaluation;

- the eligibility criteria defined in the protocol;

- the perceived benefit of the product candidate under study;

- the size of the patient population required for analysis of the clinical trial's therapeutic endpoints;

·our ability to recruit clinical trial investigators and sites with the appropriate competencies and experience;

·our ability to obtain and maintain patient consents; and

·competition for patients from clinical trials for other treatments.

We may experience difficulties in enrolling patients in our clinical trials, which could increase the costs or affect the timing or outcome of these clinical trials. This is particularly true with respect to diseases with relatively small patient populations.

We have not completed formulation development of any of our product candidates.

The development of our bacteriophage product candidates requires that we isolate, select and combine a number of bacteriophages that target the desired bacteria for that product candidate. The selection of bacteriophages for any of our product candidates is based on a variety of factors, including without limitation the ability of the selected phages, in combination, to successfully kill the targeted bacteria, the degree of cross-reactivity of the individual phages with the same part of the bacterial targets, the ability of the combined phages to satisfy regulatory requirements, our ability to manufacture sufficient quantities of the phages, intellectual property rights of third parties, and other factors. While we have selected an initial formulation of AB-SA01 for the treatment of *S. aureus* infections, there can be no assurance that this will be the final formulation of AB-SA01 for commercialization. In addition, we have initiated final phage selection for AB-PA01, our *P. aeruginosa* product. AB-CD01, which is our *C. difficile* product, is at an earlier stage. If we are unable to complete formulation development of our product candidates in the time frame that we have anticipated, then our product development timelines, and the regulatory approval of our product candidates, could be delayed.

Our product candidates must undergo rigorous clinical testing, such clinical testing may fail to demonstrate safety and efficacy and any of our product candidates could cause undesirable side effects, which would substantially delay or prevent regulatory approval or commercialization.

Before we can obtain regulatory approval for a product candidate, we must undertake extensive clinical testing in humans to demonstrate safety and efficacy to the satisfaction of the FDA or other regulatory agencies. Clinical trials of new drug candidates sufficient to obtain regulatory marketing approval are expensive and take years to complete.

We cannot be certain of successfully completing clinical testing within the time frame we have planned, or at all. We may experience numerous unforeseen events during, or as a result of, the clinical trial process that could delay or prevent us from receiving regulatory approval or commercializing our product candidates, including the following:

- our clinical trials may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical and/or preclinical testing or to abandon programs;
- the results obtained in earlier stage clinical testing may not be indicative of results in future clinical trials;
- clinical trial results may not meet the level of statistical significance required by the FDA or other regulatory agencies;
- we, or regulators, may suspend or terminate our clinical trials if the participating patients are being exposed to unacceptable health risks; and
- our product candidates may have unintended or undesirable effects on patients that may delay or preclude regulatory approval of our product candidates or limit their commercial use, if approved.

We must continue to develop manufacturing processes for our product candidates and any delay in or our inability to do so would result in delays in our clinical trials.

We are developing novel manufacturing processes for our product candidates at our facility in Ljubljana, Slovenia. The manufacturing processes for our product candidates, and the scale up of such processes for clinical trials, is novel, and there can be no assurance that we will be able to complete this work in a timely manner, if at all. Any delay in the development or scale up of these manufacturing processes could delay the start of clinical trials and harm our business. Our facility in Slovenia must also undergo ongoing inspections by JAZMP, the Slovenian agency that regulates and supervises pharmaceutical products in Slovenia, for compliance with their and the EMA’s, current good manufacturing practice regulations, or cGMP regulations, before the respective product candidates can be approved for use in clinical trials or commercialization. In the event these facilities do not receive a satisfactory cGMP inspection for the manufacture of our product candidates, we may need to fund additional modifications to our manufacturing process, conduct additional validation studies, or find alternative manufacturing facilities, any of which would result in significant cost to us as well as a delay of up to several years in obtaining approval for such product candidate.

Our manufacturing facility will be subject to ongoing periodic inspection by the European regulatory authorities, including JAZMP, and the FDA for compliance with European and FDA cGMP regulations. Compliance with these regulations and standards is complex and costly, and there can be no assurance that we will be able to comply. Any failure to comply with applicable regulations could result in sanctions being imposed (including fines, injunctions and civil penalties), failure of regulatory authorities to grant marketing approval of our product candidates, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or products, operating restrictions and criminal prosecution.

We may conduct clinical trials for our products or product candidates outside the United States and the FDA may not accept data from such trials.

We completed an investigator-sponsored clinical trial of AB-SA01 at the University of Adelaide in Australia for CRS in December 2016. Although the FDA may accept data from clinical trials conducted outside the United States, acceptance of such study data by the FDA is subject to certain conditions. For example, the study must be well designed and conducted and performed by qualified investigators in accordance with ethical principles. The study population must also adequately represent the U.S. population, and the data must be applicable to the U.S. population and U.S. medical practice in ways that the FDA deems clinically meaningful. Generally, the patient population for any clinical studies conducted outside of the United States must be representative of the population for whom we intend to label the product in the United States. In addition, such studies would be subject to the applicable local laws and FDA acceptance of the data would be dependent upon its determination that the studies also complied with all applicable U.S. laws and regulations. There can be no assurance the FDA will accept data from trials conducted outside of the United States. If the FDA does not accept any such data, it would likely result in the need for additional trials, which would be costly and time consuming and delay aspects of our business plan. During a telephonic meeting in February 2017, we received positive feedback from the FDA regarding our previously submitted proposal to proceed with a Phase 2 clinical trial of AB-SA01 for CRS. However, there can be no assurances that the FDA would ultimately support any decision by us to pursue a Phase 2 clinical trial based on data we currently have available.

We may need to license additional intellectual property rights.*

The development and commercialization of phage-based antibacterial agents may require us to obtain rights to intellectual property from third parties. For example, pursuant to our Collaborative Research and Development Agreement with the United States Army Medical Research and Materiel Command and the Walter Reed Army Institute of Research, we are currently focusing on developing bacteriophage therapeutics to treat *S. aureus* infections. To the extent the intellectual property is generated from the United States Army Medical Research and Materiel Command or Walter Reed Army Institute of Research that is used in a commercial product, we may be obligated to make payments such as royalties, licensing fees and milestone payments. We may also determine that it is necessary or advisable to license other intellectual property from third parties. There can be no assurance that such intellectual property rights would be available on commercially reasonable terms, if at all.

In April 2017, the University of Leicester provided us with notice that it intends to terminate the license agreement as a result of its determination that we have not continued to make substantial commercial progress in relation to the technology licensed to us under the agreement. Under the license agreement, we have the right to enter in good faith discussion with the University of Leicester to identify feasible next steps to remedy the perceived lack of commercial progress prior to a termination of the license agreement on such basis. Although we intend to engage in such discussions with the University of Leicester, there can be no assurance that the parties will be able to identify or agree upon feasible next steps to remedy the purported lack of commercial progress, or that we will otherwise be able to resolve the matter in a manner that results in our retaining the rights licensed to us on the original terms of the agreement, on other favorable terms, or at all. The licensed rights relate to bacteriophage therapeutic products for the treatment of *C. difficile*, which is a program we are not actively developing at present, but may choose to develop in the future pending the rights to do so.

We are subject to significant regulatory approval requirements, which could delay, prevent or limit our ability to market our product candidates.

Our research and development activities, preclinical studies, clinical trials and the anticipated manufacturing and marketing of our product candidates are subject to extensive regulation by the FDA and other regulatory agencies in the United States and by comparable authorities in Europe and elsewhere. There can be no assurance that our manufacturing facilities will satisfy the requirements of the FDA or comparable foreign authorities. We require the approval of the relevant regulatory authorities before we may commence commercial sales of our product candidates in a given market. The regulatory approval process is expensive and time-consuming, and the timing of receipt of regulatory approval is difficult to predict. Our product candidates could require a significantly longer time to gain regulatory approval than expected, or may never gain approval. We cannot be certain that, even after expending substantial time and financial resources, we will obtain regulatory approval for any of our product candidates. A delay or denial of regulatory approval could delay or prevent our ability to generate product revenues and to achieve profitability.

Changes in regulatory approval policies during the development period of any of our product candidates, changes in, or the enactment of, additional regulations or statutes, or changes in regulatory review practices for a submitted product application may cause a delay in obtaining approval or result in the rejection of an application for regulatory approval.

Regulatory approval, if obtained, may be made subject to limitations on the indicated uses for which we may market a product. These limitations could adversely affect our potential product revenues. Regulatory approval may also require costly post-marketing follow-up studies. In addition, the labeling, packaging, adverse event reporting, storage, advertising, promotion and record-keeping related to the product will be subject to extensive ongoing regulatory requirements. Furthermore, for any marketed product, its manufacturer and its manufacturing facilities will be subject to continual review and periodic inspections by the FDA or other regulatory authorities. Failure to comply with applicable regulatory requirements may, among other things, result in fines, suspensions of regulatory approvals, product recalls, product seizures, operating restrictions and criminal prosecution.

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A variety of risks associated with our international operations could materially adversely affect our business.

In addition to our U.S. operations, we have operations and subsidiaries in the United Kingdom, Australia and Slovenia. We face risks associated with our international operations, including possible unfavorable regulatory, pricing and reimbursement, political, tax and labor conditions, which could harm our business. We are subject to numerous risks associated with international business activities, including:

- compliance with differing or unexpected regulatory requirements for the development, manufacture and, if approved, commercialization of our product candidates;
- difficulties in staffing and managing foreign operations;
- foreign government taxes, regulations and permit requirements;
- U.S. and foreign government tariffs, trade restrictions, price and exchange controls and other regulatory requirements;
- anti-corruption laws, including the Foreign Corrupt Practices Act, or the FCPA;
- economic weakness, including inflation, natural disasters, war, events of terrorism or political instability in particular foreign countries;
- fluctuations in currency exchange rates, which could result in increased operating expenses and reduced revenues, and other obligations related to doing business in another country;
- compliance with tax, employment, immigration and labor laws, regulations and restrictions for employees living or traveling abroad;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad;

- changes in diplomatic and trade relationships; and

- challenges in enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect intellectual property rights to the same extent as the United States.

These and other risks associated with our international operations may materially adversely affect our business, financial condition and results of operations.

We do not have a sales force and do not currently have plans to develop one.

The commercial success of any of our product candidates will depend upon the strength of sales and marketing efforts for them. We do not have a sales force and have no experience in sales, marketing or distribution. To successfully commercialize our product candidates, we will need to develop such a capability ourselves or seek assistance from a third party with a large distribution system and a large direct sales force. We may be unable to put such a plan in place. In addition, if we arrange for others to market and sell our products, our revenues will depend upon the efforts of those parties. Such arrangements may not succeed. Even if one or more of our product candidates is approved for marketing, if we fail to establish adequate sales, marketing and distribution capabilities, independently or with others, our business will be materially harmed.

Our success depends in part on attracting, retaining and motivating our personnel.*

Our success depends on our continued ability to attract, retain and motivate highly qualified management, clinical and scientific personnel and on our ability to develop and maintain important relationships with leading academic institutions, clinicians and scientists. As of May 10, 2017, we had 32 full time employees. Our success will depend on our ability to retain and motivate personnel and hire additional qualified personnel when required. Competition for qualified personnel in the biotechnology field is intense. We face competition for personnel from other biotechnology and pharmaceutical companies, universities, public and private research institutions and other organizations. We also face competition from other more well-funded and well-established businesses and we may also be viewed as a riskier choice from a job stability perspective due to our relative newer status than longer existing biotech and pharmaceutical companies. We may not be able to attract and retain qualified personnel on acceptable terms given the competition for such personnel. If we are unsuccessful in our retention, motivation and recruitment efforts, we may be unable to execute our business strategy.

We must manage a geographically dispersed organization.

While we are a small company, we currently have operations in the United States, Australia and Slovenia. In the future, we may also locate facilities in other locations based on proximity to personnel with the expertise needed to research, develop and manufacture phage-based therapeutics, costs of operations or other factors. Managing our organization across multiple locations and multiple time zones may reduce our efficiency, increase our expenses and increase the risk of operational difficulties in the execution of our plans.

Risks Related to Our Reliance on Third Parties

We rely on third parties for aspects of product development.

We rely on third parties such as the U.S. Army for certain aspects of product development. We have worked with the U.S. Army for research and development of product candidates to treat *S. aureus* infections. Because we rely on third parties to conduct these activities, we have less control over the success of these programs than we would if we were conducting them on our own. Factors beyond our control that could impact the success of these programs include the amount of resources devoted to the programs by the applicable third party, the staffing of those projects by third-party personnel, and the amount of time such personnel devote to our programs compared to other programs. Failure of our third-party collaborators to successfully complete the projects that we are working on with them could result in delays in product development and the need to expend additional resources, increasing our expenses beyond current expectations.

We will rely on third parties to conduct our clinical trials, and their failure to perform their obligations in a timely or competent manner may delay development and commercialization of our product candidates.

We expect to use third parties, such as clinical research organizations or the U.S. Army, to assist in conducting our clinical trials. However, we may face delays outside of our control if these parties do not perform their obligations in a timely or competent fashion or if we are forced to change service providers. This risk is heightened for clinical trials conducted outside of the United States, where it may be more difficult to ensure that clinical trials are conducted in compliance with FDA requirements. Any third party that we hire to conduct clinical trials may also provide services to our competitors, which could compromise the performance of their obligations to us. If we experience significant delays in the progress of our clinical trials and in our plans to submit Biologics License Applications, the commercial prospects for product candidates could be harmed and our ability to generate product revenue would be delayed or prevented.

Risks Related to Our Intellectual Property

We are dependent on patents and proprietary technology. If we fail to adequately protect this intellectual property or if we otherwise do not have exclusivity for the marketing of our products, our ability to commercialize products could suffer.

Our commercial success will depend in part on our ability to obtain and maintain patent protection sufficient to prevent others from marketing our product candidates, as well as to defend and enforce these patents against infringement and to operate without infringing the proprietary rights of others. Protection of our product candidates from unauthorized use by third parties will depend on having valid and enforceable patents cover our product candidates or their manufacture or use, or having effective trade secret protection. If our patent applications do not result in issued patents, or if our patents are found to be invalid, we will lose the ability to exclude others from making, using or selling the inventions claimed therein. We have a limited number of patents and pending patent applications.

The patent positions of biotechnology companies can be uncertain and involve complex legal and factual questions. This is due to inconsistent application of policy and changes in policy relating to examination and enforcement of biotechnology patents to date on a global scale. The laws of some countries may not protect intellectual property rights to the same extent as the laws of countries having well-established patent systems, and those countries may lack adequate rules and procedures for defending our intellectual property rights. Also, changes in either patent laws or in interpretations of patent laws may diminish the value of our intellectual property. We are not able to guarantee that all of our patent applications will result in the issuance of patents and we cannot predict the breadth of claims that may be allowed in our patent applications or in the patent applications we may license from others.

Central provisions of The Leahy-Smith America Invents Act, or the America Invents Act went into effect on September 16, 2012 and on March 16, 2013. The America Invents Act includes a number of significant changes to U.S. patent law. These changes include provisions that affect the way patent applications are being filed, prosecuted and litigated. For example, the America Invents Act enacted proceedings involving post-issuance patent review procedures, such as inter partes review, or IPR, and post-grant review, that allow third parties to challenge the validity of an issued patent in front of the United States Patent and Trademark Office (“U.S. PTO”) Patent Trial and Appeal Board. Each proceeding has different eligibility criteria and different patentability challenges that can be raised. IPRs permit any person (except a party who has been litigating the patent for more than a year) to challenge the validity of the patent on the grounds that it was anticipated or made obvious by prior art. Patents covering pharmaceutical products have been subject to attack in IPRs from generic drug companies and from hedge funds. If it is within nine months of the issuance of the challenged patent, a third party can petition the U.S. PTO for post-grant review, which can be based on any invalidity grounds and is not limited to prior art patents or printed publications.

In post-issuance proceedings, U.S. PTO rules and regulations generally tend to favor patent challengers over patent owners. For example, unlike in district court litigation, claims challenged in post-issuance proceedings are given their broadest reasonable meaning, which increases the chance a claim might be invalidated by prior art or lack support in the patent specification. As another example, unlike in district court litigation, there is no presumption of validity for an issued patent, and thus, a challenger's burden to prove invalidity is by a preponderance of the evidence, as opposed to the heightened clear and convincing evidence standard. As a result of these rules and others, statistics released by the U.S. PTO show a high percentage of claims being invalidated in post-issuance proceedings. Moreover, with few exceptions, there is no standing requirement to petition the U.S. PTO for inter partes review or post-grant review. In other words, companies that have not been charged with infringement or that lack commercial interest in the patented subject matter can still petition the United States PTO for review of an issued patent. Thus, even where we have issued patents, our rights under those patents may be challenged and ultimately not provide us with sufficient protection against competitive products or processes.

The degree of future protection for our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

- we might not be the first to file patent applications for our inventions;
- others may independently develop similar or alternative product candidates to any of our product candidates that fall outside the scope of our patents;
- our pending patent applications may not result in issued patents;
- our issued patents may not provide a basis for commercially viable products or may not provide us with any competitive advantages or may be challenged by third parties;
- others may design around our patent claims to produce competitive products that fall outside the scope of our patents;
- we may not develop additional patentable proprietary technologies related to our product candidates; and
- we are dependent upon the diligence of our appointed agents in national jurisdictions, acting for and on our behalf, which control the prosecution of pending domestic and foreign patent applications and maintain granted domestic and foreign patents.

An issued patent does not guarantee us the right to practice the patented technology or commercialize the patented product. Third parties may have blocking patents that could be used to prevent us from commercializing our patented products and practicing our patented technology. Our issued patents and those that may be issued in the future may be challenged, invalidated or circumvented, which could limit our ability to prevent competitors from marketing the same or related product candidates or could limit the length of the term of patent protection of our product candidates. Moreover, because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any of our product candidates can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of the patent. Patent term extensions may not be available for these patents.

We rely on trade secrets and other forms of non-patent intellectual property protection. If we are unable to protect our trade secrets, other companies may be able to compete more effectively against us.

We rely on trade secrets to protect certain aspects of our technology, including our proprietary processes for manufacturing and purifying bacteriophages. Trade secrets are difficult to protect, especially in the pharmaceutical industry, where much of the information about a product must be made public during the regulatory approval process. Although we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, outside scientific collaborators and other advisors may unintentionally or willfully disclose our information to competitors. Enforcing a claim that a third party illegally obtained and is using our trade secret information is expensive and time-consuming, and the outcome is unpredictable. In addition, courts outside the United States may be less willing to or may not protect trade secrets. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how.

If we are sued for infringing intellectual property rights of third parties or if we are forced to engage in an interference proceeding, it will be costly and time-consuming, and an unfavorable outcome in that litigation or interference would have a material adverse effect on our business.

Our ability to commercialize our product candidates depends on our ability to develop, manufacture, market and sell our product candidates without infringing the proprietary rights of third parties. Numerous United States and foreign patents and patent applications, which are owned by third parties, exist in the general field of anti-infective products or in fields that otherwise may relate to our product candidates. If we are shown to infringe, we could be enjoined from use or sale of the claimed invention if we are unable to prove that the patent is invalid. In addition, because patent applications can take many years to issue, there may be currently pending patent applications, unknown to us, which may later result in issued patents that our product candidates may infringe, or which may trigger an interference proceeding regarding one of our owned or licensed patents or applications. There could also be existing patents of which we are not aware that our product candidates may inadvertently infringe or which may become involved in an interference proceeding.

The biotechnology and pharmaceutical industries are characterized by the existence of a large number of patents and frequent litigation based on allegations of patent infringement. For so long as our product candidates are in clinical trials, we believe our clinical activities fall within the scope of the exemptions provided by 35 U.S.C. Section 271(e) in the United States, which exempts from patent infringement liability activities reasonably related to the development and submission of information to the FDA. As our clinical investigational drug product candidates progress toward commercialization, the possibility of a patent infringement claim against us increases. While we attempt to ensure that our active clinical investigational drugs and the methods we employ to manufacture them, as well as the methods for their use we intend to promote, do not infringe other parties' patents and other proprietary rights, we cannot be certain they do not, and competitors or other parties may assert that we infringe their proprietary rights in any event.

We may be exposed to future litigation based on claims that our product candidates, or the methods we employ to manufacture them, or the uses for which we intend to promote them, infringe the intellectual property rights of others. Our ability to manufacture and commercialize our product candidates may depend on our ability to demonstrate that the manufacturing processes we employ and the use of our product candidates do not infringe third-party patents. If third-party patents were found to cover our product candidates or their use or manufacture, we could be required to pay damages or be enjoined and therefore unable to commercialize our product candidates, unless we obtained a license. A license may not be available to us on acceptable terms, if at all.

Risks Related to Our Industry

If our competitors are able to develop and market products that are more effective, safer or more affordable than ours, or obtain marketing approval before we do, our commercial opportunities may be limited.

Competition in the biotechnology and pharmaceutical industries is intense and continues to increase. Some companies that are larger and have significantly more resources than we do are aggressively pursuing antibacterial development programs, including traditional therapies and therapies with novel mechanisms of action. In addition, other companies are developing phage-based products for non-therapeutic uses, and may elect to use their expertise in phage development and manufacturing to try to develop products that would compete with ours.

We also face potential competition from academic institutions, government agencies and private and public research institutions engaged in the discovery and development of drugs and therapies. Many of our competitors have significantly greater financial resources and expertise in research and development, preclinical testing, conducting clinical trials, obtaining regulatory approvals, manufacturing, sales and marketing than we do. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established pharmaceutical companies.

Our competitors may succeed in developing products that are more effective, have fewer side effects and are safer or more affordable than our product candidates, which would render our product candidates less competitive or noncompetitive. These competitors also compete with us to recruit and retain qualified scientific and management personnel, establish clinical trial sites and patient registration for clinical trials, as well as to acquire technologies and technology licenses complementary to our programs or advantageous to our business. Moreover, competitors that are able to achieve patent protection, obtain regulatory approvals and commence commercial sales of their products before we do, and competitors that have already done so, may enjoy a significant competitive advantage.

The Generating Antibiotics Incentives Now Act is intended to provide incentives for the development of new, qualified infectious disease products. These incentives may result in more competition in the market for new antibiotics, and may cause pharmaceutical and biotechnology companies with more resources than we have to shift their efforts towards the development of products that could be competitive with our product candidates.

There is a substantial risk of product liability claims in our business. If we do not obtain sufficient liability insurance, a product liability claim could result in substantial liabilities.

Our business exposes us to significant potential product liability risks that are inherent in the development, manufacturing and marketing of human therapeutic products. Regardless of merit or eventual outcome, product liability claims may result in:

·delay or failure to complete our clinical trials;

·withdrawal of clinical trial participants;

·decreased demand for our product candidates;

·injury to our reputation;

·litigation costs;

·substantial monetary awards against us; and

·diversion of management or other resources from key aspects of our operations.

If we succeed in marketing products, product liability claims could result in an FDA investigation of the safety or efficacy of our products, our manufacturing processes and facilities or our marketing programs. An FDA investigation

could also potentially lead to a recall of our products or more serious enforcement actions, or limitations on the indications, for which they may be used, or suspension or withdrawal of approval.

We have product liability insurance that covers our clinical trials up to a $10.0 million annual per claim and aggregate limit. We intend to expand our insurance coverage to include the sale of commercial products if marketing approval is obtained for our product candidates or any other compound that we may develop. However, insurance coverage is expensive and we may not be able to maintain insurance coverage at a reasonable cost or at all, and the insurance coverage that we obtain may not be adequate to cover potential claims or losses.

Even if we receive regulatory approval to market our product candidates, the market may not be receptive to our product candidates upon their commercial introduction, which would negatively affect our ability to achieve profitability.

Our product candidates may not gain market acceptance among physicians, patients, healthcare payors and the medical community. The degree of market acceptance of any approved products will depend on a number of factors, including:

·the effectiveness of the product;

·the prevalence and severity of any side effects;

·potential advantages or disadvantages over alternative treatments;

·relative convenience and ease of administration;

·the strength of marketing and distribution support;

·the price of the product, both in absolute terms and relative to alternative treatments; and

·sufficient third-party coverage or reimbursement.

If our product candidates receive regulatory approval but do not achieve an adequate level of acceptance by physicians, healthcare payors and patients, we may not generate product revenues sufficient to attain profitability.

Foreign governments tend to impose strict price controls, which may adversely affect our future profitability.

In some foreign countries, particularly in the European Union, prescription drug pricing is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our profitability will be negatively affected.

We may incur significant costs complying with environmental laws and regulations, and failure to comply with these laws and regulations could expose us to significant liabilities.

Our research and development activities use biological and hazardous materials that are dangerous to human health and safety or the environment. We are subject to a variety of federal, state and local laws and regulations governing the use, generation, manufacture, storage, handling and disposal of these materials and wastes resulting from these materials. We are also subject to regulation by the Occupational Safety and Health Administration, or OSHA, state and federal environmental protection agencies and to regulation under the Toxic Substances Control Act. OSHA, state governments or federal Environmental Protection Agency, or EPA, may adopt regulations that may affect our research and development programs. We are unable to predict whether any agency will adopt any regulations that could have a material adverse effect on our operations. We have incurred, and will continue to incur, capital and operating expenditures and other costs in the ordinary course of our business in complying with these laws and regulations.

Although we believe our safety procedures for handling and disposing of these materials comply with federal, state and local laws and regulations, we cannot entirely eliminate the risk of accidental injury or contamination from the use, storage, handling or disposal of hazardous materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could significantly exceed our insurance coverage.

Risks Related to Our Common Stock

The price of our common stock has been and may continue to be volatile.

The stock markets in general, the markets for biotechnology stocks and, in particular, the stock price of our common stock, have experienced extreme volatility. The market for our common stock is characterized by significant price volatility when compared to the shares of larger, more established companies that trade on a national securities exchange and have large public floats, and we expect that our share price will continue to be more volatile than the shares of such larger, more established companies for the indefinite future. The volatility in our share price is attributable to a number of factors. Our common shares are, compared to the shares of such larger, more established companies, sporadically and thinly traded. As a consequence of this limited liquidity, the trading of relatively small quantities of shares by our stockholders may disproportionately influence the price of those shares in either direction. The price for our shares could, for example, decline precipitously in the event that a large number of shares of our common stock are sold on the market without commensurate demand. We are also a speculative or "risky" investment due to the early stage of our drug development programs and our lack of profits to date, and uncertainty of future market acceptance for our potential products and our ability to continue as a going concern. As a consequence of this enhanced risk, more risk-adverse investors may, under the fear of losing all or most of their investment in the event of negative news or lack of progress, be more inclined to sell their shares on the market more quickly and at greater discounts than would be the case with the stock of a larger, more established company that has a large public float and broader stockholder base. Many of these factors are beyond our control and may decrease the market price of our common stock, regardless of our operating performance. We cannot make any predictions or projections as to what the prevailing market price for our common shares will be at any time, including as to whether our common stock will sustain their current market prices, or as to what effect that the sale of shares or the availability of common stock for sale at any time will have on the prevailing market price.

Price declines in our common stock could also result from general market and economic conditions and a variety of other factors, including:

- adverse results or delays in our clinical trials;
- adverse actions taken by regulatory agencies with respect to our product candidates, clinical trials or the manufacturing processes of our product candidates;
- announcements of technological innovations, patents or new products by our competitors;
- regulatory developments in the United States and foreign countries;

- any lawsuit involving us or our product candidates;
- announcements concerning our competitors, or the biotechnology or pharmaceutical industries in general;
- developments concerning any strategic alliances or acquisitions we may enter into;
- actual or anticipated variations in our operating results;
- changes in recommendations by securities analysts or lack of analyst coverage;
- deviations in our operating results from the estimates of analysts;
- our inability, or the perception by investors that we will be unable, to continue to meet all applicable requirements for continued listing of our common stock on the NYSE MKT, and the possible delisting of our common stock;
- sales of our common stock by our executive officers, directors and principal stockholders or sales of substantial amounts of common stock; and
- loss of any of our key scientific or management personnel.

In the past, following periods of volatility in the market price of a particular company's securities, litigation has often been brought against that company. Any such lawsuit could consume resources and management time and attention, which could adversely affect our business.

We may be required to issue a significant number of additional shares of common stock for no additional consideration to certain of our stockholders.*

In April 2016 we entered into a Common Stock Issuance Agreement, or CSIA, with certain former holders, or the Holders, of our Series B Preferred Stock. We may be required to issue a significant number of additional shares of common stock for no additional consideration to the Holders. Pursuant to the CSIA, we agreed that if in the future we conduct one or more bona fide equity financings in which we sell shares of our common stock or preferred stock at a price of less than $40.50 per share, we will issue to the Holders, for no additional consideration, a number of additional shares of common stock, or Additional Shares, based on a specified formula. We refer to such rights of the Holders to receive Additional Shares as the Additional Issuance Rights. Specifically, in the event we conduct such a financing, the Holders would be entitled to receive (absent consideration of any applicable restrictions on the number of shares that can be issued in a non-public offering under NYSE MKT rules and interpretations without stockholder

approval) in the aggregate a number of Additional Shares equal to (A) the product of (x) 103,705 multiplied by (y) a fraction, the numerator of which is $40.50 and the denominator of which is the lowest price per share paid by investors in such dilutive financing, or the Effective Price, less (B) 103,705 and all Additional Shares issued previously to the Holders pursuant to the Additional Issuance Rights. The foregoing formula will be reduced to the extent the resulting number of shares would exceed 19.99% of the outstanding shares of common stock immediately prior to the applicable financing, and is subject to further reductions related limitations under Section 713(a) of the NYSE MKT Company Guide.

Pursuant to Section 713(a) of the NYSE MKT Company Guide, stockholder approval is generally required prior to the issuance of common stock or common stock equivalents in connection with a transaction other than a public offering involving the sale, issuance, or potential issuance by the issuer of common stock or common stock equivalents equal to 20% or more of the outstanding shares of common stock as of immediately prior to the transaction for less than the greater of book or market value of the stock. At our 2016 annual meeting of stockholders on June 20, 2016, our stockholders approved the issuance by us of up to 103,705 Additional Shares, for purposes of Section 713(a) of the NYSE MKT Company Guide, to the extent required to satisfy the Additional Issuance Rights. On June 3, 2016, we completed a registered public offering of common stock and warrants to purchase common stock at a combined price per share and associated warrant of $23.50. As a result of this offering, we issued to the Holders an aggregate of 75,020 Additional Shares. In November 2016, we completed a registered public offering of common stock and warrants to purchase common stock at a price of $7.50 per share and accompanying warrant. In May 2017, we completed a public offering of common stock and warrants to purchase common stock, at a price of $1.49 per share of common stock and $0.01 per accompanying warrant. Pursuant to the formula set forth in the CSIA, the Holders may claim that we have an obligation to issue them, in the aggregate, up to 552,169 Additional Shares as a result of the November 2016 public offering and the May 2017 public offering. However, under Section 713(a) of the NYSE MKT Company Guide, we are only permitted to issue 28,684 Additional Shares to the Holders without further stockholder approval. As of the date of this report, no Additional Shares have been issued to the Holders in connection with the November 2016 public offering or the May 2017 public offering. We may be required to obtain stockholder approval to issue additional shares beyond what we are currently allowed to issue them under Section 713(a) of the NYSE MKT, or provide other forms of consideration to the Holders, as a result of the November 2016 and May 2017 public offerings.

- Our inability to comply in full with our potential obligation under the CSIA to issue shares to the Holders in connection with the completion of our November 2016 public offering and May 2017 public offering could have additional adverse consequences, including, without limitation:

- the Holders may bring an action against us for breach of contract, or threaten to bring an action against us, either of which could require us to expend significant time and resources to resolve the matter, and we may not be successful;

- we may need to seek approval from our stockholders in order to issue Additional Shares to the Holders, which would require us to expend time and resources, and our stockholders may not ultimately approve such issuance; and

- we may need to provide other consideration to the Holders to settle potential claims arising from our inability to satisfy our potential contractual obligations under the CSIA, which could involve:

- cash make-whole payments, which in turn would deplete our cash resources faster than we would otherwise anticipate; and

- other unfavorable terms that could make it difficult for us to raise financing in the future, which would raise further doubts about our ability to continue as a going concern.

The occurrence of any of the foregoing, or even the potential for them to occur, could result in a material decline in our stock price.

Stockholders will incur dilution of their percentage ownership interest in our common stock to the extent we issue Additional Shares to the Holders pursuant to the Additional Issuance Rights. In addition, because the Additional Shares will be issued for no additional consideration, any such issuance would reduce our net tangible book value per share.

Any issuance or potential issuance of Additional Shares could adversely affect our stock price, make it more difficult for us to raise capital on favorable terms, or at all, and have a material adverse effect on our business, results of operations and financial condition

A significant number of shares of our common stock are subject to issuance upon exercise of outstanding warrants and options, which upon such exercise may result in dilution to our security holders.*

As of March 31, 2017, we had outstanding warrants to purchase an aggregate of 775,137 shares of our common stock at a weighted average exercise price of $22.86 per share, and outstanding options to 120,360 shares of our common stock at a weighted average exercise price of $41.60 per share. The $22.86 weighted-average exercise price set forth above with respect to the 775,137 shares of common stock issuable upon the exercise of outstanding warrants does not take into account the exercise price adjustment that will result under the terms of the warrants issued in November 2016 (exercisable for 533,500 shares of common stock in the aggregate at an exercise price of $7.50 per share) in connection with our April 2017 1-for-10 reverse stock split. Under the terms of the November 2016 warrants, following a reverse stock split, on the 16th trading day immediately following such reverse stock split, or May 16, 2017, the exercise price of the November 2016 warrants will be reduced to the lowest volume-weighted average price between and including April 25, 2017 and May 15, 2017. The exercise price and/or the number of shares of common stock issuable upon exercise of the warrants may be adjusted in certain circumstances, including certain issuances of securities at a price less than the then-current exercise price, subdivisions and stock splits, stock dividends, combinations, reorganizations, reclassifications, consolidations, mergers or sales of properties and assets and upon the issuance of certain assets or securities to holders of our common stock, as applicable. Although we cannot determine when these warrants or options will ultimately be exercised, it is reasonable to assume that such warrants and options will be exercised only if the exercise price is below the market price of our common stock. To the extent any of our outstanding warrants or options are exercised, additional shares of our common stock will be issued that will generally be eligible for resale in the public market (subject to limitations under Rule 144 under the Securities Act for certain of our warrants and with respect to shares held by our affiliates), which will result in dilution to our security holders. The issuance of additional securities could also have an adverse effect on the market price of our common stock.

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

As of March 31, 2017, our executive officers, directors, greater than 5% stockholders and their affiliates beneficially owned a majority of our outstanding voting stock. Therefore, these stockholders could have the ability to influence us through this ownership position. These stockholders may be able to significantly affect or, acting together, control matters requiring stockholder approval, including elections of directors, amendments of our organizational documents, and approval of any merger, sale of assets, or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may believe are in your best interest as one of our stockholders.

Provisions of Washington law and our current articles of incorporation and bylaws may discourage another company from acquiring us and may prevent attempts by our stockholders to replace or remove our current management.

Provisions of Washington law and our current articles of incorporation and bylaws may discourage, delay or prevent a merger or acquisition that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. In addition, these provisions may frustrate or prevent any attempts by our

stockholders to replace or remove our current management by making it more difficult for stockholders to replace or remove our board of directors. These provisions include:

- authorizing the issuance of "blank check" preferred stock without any need for action by stockholders;
- providing for a classified board of directors with staggered terms;
- requiring supermajority stockholder voting to effect certain amendments to our articles of incorporation and bylaws; and
- establishing advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted on by stockholders at stockholder meetings.

In addition, because we are incorporated in Washington, we are governed by the provisions of Chapter 23B.19 of the Washington Business Corporation Act, which, among other things, restricts the ability of stockholders owning 10% or more of our outstanding voting stock from merging or combining with us. These provisions could discourage potential acquisition attempts and could reduce the price that investors might be willing to pay for shares of our common stock in the future and result in the market price being lower than it would without these provisions.

Although we believe these provisions collectively provide for an opportunity to receive higher bids by requiring potential acquirers to negotiate with our board of directors, they would apply even if an offer may be considered beneficial by some stockholders. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it difficult for stockholders to replace members of our board of directors, which is responsible for appointing the members of our management

We have never paid dividends on our common stock, and we do not anticipate paying any cash dividends on our common stock in the foreseeable future.

We have never declared or paid cash dividends on our common stock. We do not anticipate paying any cash dividends on our common stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. As a result, capital appreciation, if any, of our common stock will be our stockholders' sole source of gain for the foreseeable future.

Maintaining and improving our financial controls and the requirements of being a public company may strain our resources, divert management's attention and affect our ability to attract and retain qualified board members.

As a public company, we are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act and the rules of the NYSE MKT. The requirements of these rules and regulations increase our legal and financial compliance costs, make some activities more difficult, time-consuming or costly and place strain on our personnel, systems and resources. The Exchange Act requires, among other things, that we file annual, quarterly and current reports with respect to our business and financial condition.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. Ensuring that we have adequate internal financial and accounting controls and procedures in place is a costly and time-consuming effort that needs to be re-evaluated frequently.

We currently do not have an internal audit group, and we may need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge. Implementing any appropriate changes to our internal controls may require specific compliance training for our directors, officers and employees, entail substantial costs to modify our existing accounting systems, and take a significant period of time to complete. Such changes may not, however, be effective in maintaining the adequacy of our internal controls, and any failure to maintain that adequacy, or consequent inability to produce accurate financial statements on a timely basis, could increase our operating costs and could materially impair our ability to operate our business. Moreover, effective internal controls are necessary for us to produce reliable financial reports and are important to help prevent fraud.

In accordance with NYSE MKT rules, we are required to maintain a majority independent board of directors. The various rules and regulations applicable to public companies make it more difficult and more expensive for us to maintain directors' and officers' liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to maintain coverage. If we are unable to maintain adequate directors' and officers' insurance, our ability to recruit and retain qualified officers and directors will be significantly curtailed.

If securities or industry analysts do not publish research or publish unfavorable research about our business, our stock price and trading volume could decline.

The trading market for our common stock will depend in part on the research and reports that securities or industry analysts publish about us or our business. We currently have three securities analysts and may never obtain additional research coverage by other securities and industry analysts. If no additional securities or industry analysts commence coverage of our company, the trading price for our stock could be negatively impacted. If we obtain additional securities or industry analyst coverage and if one or more of the analysts who covers us downgrades our stock or publishes inaccurate or unfavorable research about our business, our stock price would likely decline. If one or more of these analysts ceases coverage of us or fails to publish reports on us regularly, demand for our stock could decrease, which could cause our stock price and trading volume to decline.

We are an "emerging growth company" and we cannot be certain if the reduced disclosure requirements applicable to "emerging growth companies" will make our common stock less attractive to investors.*

We are an “emerging growth company,” as defined under the JOBS Act. For so long as we are an “emerging growth company,” we intend to take advantage of certain exemptions from reporting requirements that are applicable to other public companies that are not “emerging growth companies” including, but not limited to, compliance with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We could be an “emerging growth company” for up to five years, although we may lose such status earlier, depending on the occurrence of certain events. We will remain an “emerging growth company” until the earliest to occur of (i) the last day of the fiscal year (a) following the fifth anniversary of our initial public offering conducted after we became a reporting company under the Exchange Act pursuant to our registration statement on Form 10 (File No. 000-23930), (b) in which we have total annual gross revenue of approximately $1.0 billion or (c) in which we are deemed to be a “large accelerated filer” under the Exchange Act, which means that the market value of our common stock that is held by non-affiliates exceeds $700 million as of June 30th of the prior year, and (ii) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

We cannot predict if investors will find our common stock less attractive or our company less comparable to certain other public companies because we will rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

Under the JOBS Act, “emerging growth companies” can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards, and, therefore, will be subject to the same new or revised accounting standards as other public companies that are not “emerging growth companies.”

Sales of a substantial number of shares of our common stock in the public market by our existing stockholders could cause our stock price to decline.

Sales of a substantial number of shares of our common stock in the public market or the perception that these sales might occur, could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. We are unable to predict the effect that sales may have on the prevailing market price of our common stock.

Certain holders of our common stock are entitled to rights with respect to the registration of their shares under the Securities Act. Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares held by our affiliates as defined in Rule 144 under the Securities Act. Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock.

Future sales and issuances of our common stock or rights to purchase common stock by us, including pursuant to our equity incentive plans, could result in additional dilution of the percentage ownership of our stockholders and could cause our stock price to decline.

We expect that significant additional capital will be needed in the future to continue our planned operations, including conducting clinical trials, commercialization efforts, expanded research and development activities and costs associated with operating as a public company. To the extent we raise additional capital by issuing equity or convertible securities, our stockholders may experience substantial dilution. We may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible securities or other equity securities in more than one transaction, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing stockholders, and new investors could gain rights superior to our existing stockholders.

Pursuant to our 2016 Equity Incentive Plan, or the 2016 Plan, our management is authorized to grant stock options and other equity-based awards to our employees, directors and consultants. The number of shares available for future grant under the 2016 Plan will automatically increase on January 1st of each year by up to 5% of all shares of our capital stock outstanding as of December 31st of the preceding calendar year, subject to the ability of our board of directors to take action to reduce the size of the increase in any given year. In addition, we may grant or provide for the grant of rights to purchase shares of our common stock pursuant to our Employee Stock Purchase Plan, or ESPP. The number of shares of our common stock reserved for issuance under the ESPP will automatically increase on January 1st of each calendar year by the lessor of 1% of the total number of shares of our common stock outstanding on December 31st of the preceding calendar year and 30,000 shares, subject to the ability of our board of directors to take action to reduce the size of the increase in any given year. Currently, we plan to register the increased number of shares available for issuance under the 2016 Plan and ESPP each year. Increases in the number of shares available for future grant or purchase may result in additional dilution, which could cause our stock price to decline.

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

None.

Item 3. Defaults upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

See the Exhibit Index following the signature page of this report, which is incorporated herein by reference.

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.

AMPLIPHI BIOSCIENCES CORPORATION

Date: May 15, 2017 By /s/ Michael Scott Salka
Name: Michael Scott Salka
Title: Chief Executive Officer
(Principal Executive Officer)

By /s/ Steve R. Martin
Name: Steve R. Martin
Title: Chief Financial Officer
(Principal Financial Officer)

EXHIBIT INDEX

Number	Description
3.1	Amended and Restated Articles of Incorporation of the Registrant, as amended (incorporated by reference to Exhibit 3.1 to the Quarterly Report on Form 10-Q, filed on November 16, 2015).
3.2	Articles of Amendment to Articles of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K, filed on April 24, 2017).
3.3	Amended and Restated Bylaws of the Registrant, as amended (incorporated by reference to Exhibit 3.2 to the Quarterly Report on Form 10-Q, filed on November 16, 2015).
4.1	Reference is made to Exhibits 3.1, 3.2 and 3.3.
4.2	Form of Common Stock Certificate (incorporated by reference to Exhibit 4.4 to the Registration Statement on Form S-8 (File No. 333-217563), filed on May 1, 2017).
4.3	Form of Warrant to Purchase Shares of Common Stock issued to purchasers in June 2013, July 2013 and December 2013 in connection with private placements (incorporated by reference to Exhibit 4.2 to the Registration Statement on Form 10 (File No. 000-23930), filed December 16, 2013, as amended).
4.4	Subscription Agreement to Purchase Series B Preferred Stock and Common Stock Warrants, dated June 26, 2013 (incorporated by reference to Exhibit 4.3 to the Registration Statement on Form 10 (File No. 000-23930), filed December 16, 2013, as amended).
4.5	Registration Rights Agreement, dated December 16, 2013, by and among the Registrant and certain purchasers of the Registrant's Common Stock (incorporated by reference to Exhibit 4.4 to the Registration Statement on Form 10 (File No. 000-23930), filed December 16, 2013, as amended).
4.6	Subscription Agreement to Purchase Common Stock and Warrants, dated December 16, 2013 (incorporated by reference to Exhibit 4.5 to the Registration Statement on Form 10 (File No. 000-23930), filed December 16, 2013, as amended).
4.7	Subscription Agreement to Purchase Common Stock and Warrants, dated March 10, 2015 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K, filed March 19, 2015).
4.8	Form of Common Stock Warrant issued to purchasers in March 2015 private placement (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K, filed March 19, 2015).
4.9	Registration Rights Agreement, dated March 10, 2015, by and among the Registrant and certain purchasers of the Registrant's Common Stock (incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K, filed March 19, 2015).
4.10	Form of Amendment to Warrants to Purchase Shares of Common Stock issued to purchasers in June 2013, July 2013 and December 2013 in connection with private placements (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K, filed on May 15, 2015).
4.11	Form of Warrant to Purchase Shares of Common Stock issued in connection with the Registrant's acquisition of Biocontrol Ltd in December 2011 (incorporated by reference to Exhibit 4.11 to the Annual Report on Form 10-K, filed on March 30, 2016).
4.12	Form of Warrant to Purchase Shares of Common Stock issued in connection with the issuance of convertible notes of the Registrant in February 2013, March 2013, April 2013 and May 2013 (incorporated by reference to Exhibit 4.12 to the Annual Report on Form 10-K, filed on March 30, 2016).
4.13	Form of Warrant to Purchase Shares of Common Stock issued in connection with the Registrant's acquisition of certain assets of Novolytics Limited in February 2016 (incorporated by reference to Exhibit 4.13 to the Annual Report on Form 10-K, filed on March 30, 2016).
4.14	Common Stock Issuance Agreement, dated April 8, 2016, by and among the Registrant and the persons and entities listed on Exhibit A thereto (incorporated by reference to Exhibit 4.1 to the Current Report on Form

	8-K, filed on April 8, 2016).
4.15	Form of Warrant to Purchase Common Stock issued to purchasers in May 2016 registered direct offering (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K, filed on June 1, 2016).
4.16	Form of Securities Purchase Agreement (incorporated by reference to Exhibit 99.3 to the Current Report on Form 8-K, filed on June 1, 2016).
4.17	Form of Warrant to Purchase Common Stock issued to purchasers in November 2016 registered direct offering (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K, filed on November 17, 2016).
4.18	Form of Warrant to Purchase Common Stock issued to purchasers in May 2017 (incorporated by reference to Exhibit 4.18 to the Registrant's Registration Statement on Form S-1 (File No. 333-217169)).
4.19	Form of Pre-funded Warrant (incorporated by reference to Exhibit 4.19 to the Registrant's Registration Statement on Form S-1 (File No. 333-217169)).
10.1+	Offer Letter, dated January 27, 2017, by and between the Registrant and Igor P. Bilinsky, Ph.D. (incorporated by reference to Exhibit 99.1 to the Current Report on Form 8-K, filed on February 2, 2017).

10.2+	Consulting Agreement, dated February 1, 2017, by and between the Registrant and Wendy S. Johnson (incorporated by reference to Exhibit 99.2 to the Current Report on Form 8-K, filed on February 2, 2017).
31.1	Certification of Principal Executive Officer required by Rule 13a-14(a) or Rule 15d-14(a).
31.2	Certification of Principal Financial Officer required by Rule 13a-14(a) or Rule 15d-14(a).
32.1	Certification of Principal Executive Officer Required by Rule 13a-14(b) or Rule 15d-14(b) and 18 U.S.C. 1350.
32.2	Certification of Principal Financial Officer Required by Rule 13a-14(b) or Rule 15d-14(b) and 18 U.S.C. 1350.
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.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.

+ Indicates management contract or compensatory plan.