

**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549  
**FORM 10-Q**

(Mark One)

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

For the quarterly period ended **March 31, 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 **001-36845**

**Bellerophon Therapeutics, Inc.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of  
incorporation or organization)

**47-3116175**

(I.R.S. Employer  
Identification No.)

**184 Liberty Corner Road, Suite 302**  
**Warren, New Jersey**  
(Address of principal executive offices)

**07059**  
(Zip Code)

**(908) 574-4770**

(Registrant's telephone number, including area code)

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

Indicate by check mark whether the registrant has submitted electronically 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  No

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
	(Do not check if a smaller reporting company)	Emerging growth company	<input checked="" type="checkbox"/>

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

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

The number of shares outstanding of the registrant's common stock as of May 10, 2017: 32,988,683

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## REFERENCES TO BELLEROPHON

In this Quarterly Report on Form 10-Q, unless otherwise stated or the context otherwise requires references to the “Company,” “Bellerophon,” “we,” “us” and “our” refer to Bellerophon Therapeutics, Inc. and its consolidated subsidiaries.

## FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this Quarterly Report on Form 10-Q, including statements regarding our future results of operations and financial position, business strategy and plans and objectives of management for future operations, are forward-looking statements. The words “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “could,” “intends,” “target,” “projects,” “contemplates,” “believes,” “estimates,” “predicts,” “potential” or “continue” or the negative of these terms or other similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

The forward-looking statements in this Quarterly Report on Form 10-Q include, among other things, statements about:

- the timing of the ongoing and expected clinical trials of our product candidates, including statements regarding the timing of completion of the trials and the respective periods during which the results of the trials will become available;
- our ability to obtain adequate financing to meet our future operational and capital needs;
- our ability to continue as a going concern within one year beyond the filing of this Quarterly Report on Form 10-Q.
- the timing of and our ability to obtain marketing approval of our product candidates, and the ability of our product candidates to meet existing or future regulatory standards;
- our ability to comply with government laws and regulations;
- our commercialization, marketing and manufacturing capabilities and strategy;
- our estimates regarding the potential market opportunity for our product candidates;
- the timing of or our ability to enter into partnerships to market and commercialize our product candidates;
- the rate and degree of market acceptance of any product candidate for which we receive marketing approval;
- our intellectual property position;
- our estimates regarding expenses, future revenues, capital requirements and needs for additional funding and our ability to obtain additional funding;
- the success of competing treatments;
- our competitive position; and
- our expectations regarding the time during which we will be an “emerging growth company” under the Jumpstart Our Business Startups Act of 2012.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this Quarterly Report on Form 10-Q and in our Annual Report on Form 10-K for the year ended December 31, 2016, particularly in the “Risk Factors” section, that could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

You should read this Quarterly Report on Form 10-Q and the documents that we have filed as exhibits to this Quarterly Report on Form 10-Q completely and with the understanding that our actual future results may be materially different from what we expect. We do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law.

This Quarterly Report on Form 10-Q includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information.

**PART I. FINANCIAL INFORMATION**

**Item 1. Financial Statements.**

**BELLEROPHON THERAPEUTICS, INC.**  
**CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)**  
(in thousands except share and per share data)

	As of March 31, 2017	As of December 31, 2016
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 13,539	\$ 14,453
Restricted cash	150	150
Marketable securities	3,113	5,571
Prepaid expenses and other current assets	6,442	6,331
Total current assets	23,244	26,505
Restricted cash, non-current	307	307
Other non-current assets	909	1,491
Property and equipment, net	1,300	1,399
Total assets	\$ 25,760	\$ 29,702
<b>Liabilities and Stockholders' Equity</b>		
Current liabilities:		
Accounts payable	\$ 3,944	\$ 2,807
Accrued research and development	1,183	2,573
Accrued expenses	717	922
Due to Ikaria, Inc.	216	193
Total current liabilities	6,060	6,495
Common stock warrant liability	18,900	5,215
Total liabilities	24,960	11,710
Commitments and contingencies		
Stockholders' equity:		
Common stock, \$0.01 par value per share; 125,000,000 shares authorized, 32,988,683 and 31,702,624 shares issued and outstanding at March 31, 2017 and December 31, 2016, respectively	330	317
Preferred stock, \$0.01 par value per share; 5,000,000 share authorized, zero shares issued and outstanding at March 31, 2017 and December 31, 2016	—	—
Additional paid-in capital	144,105	142,167
Accumulated other comprehensive income	—	—
Accumulated deficit	(143,635)	(124,492)
Total stockholders' equity	800	17,992
<b>Total liabilities and stockholders' equity</b>	<b>\$ 25,760</b>	<b>\$ 29,702</b>

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

**BELLEROPHON THERAPEUTICS, INC.**

**CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED)**

(in thousands except share and per share data)

	Three Months Ended March 31,	
	2017	2016
Operating expenses:		
Research and development	\$ 3,337	\$ 5,113
General and administrative	1,446	1,976
Total operating expenses	4,783	7,089
Loss from operations	(4,783)	(7,089)
Change in fair value of common stock warrant liability	(14,387)	—
Interest and other income	27	30
Pre-tax loss	(19,143)	(7,059)
Income tax benefit (expense)	—	—
Net loss	\$ (19,143)	\$ (7,059)
Weighted average shares outstanding:		
Basic and diluted	31,934,253	13,053,007
Net loss per share:		
Basic and diluted	\$ (0.60)	\$ (0.54)

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

**BELLEROPHON THERAPEUTICS, INC.**

**CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS (UNAUDITED)**

(in thousands)

	Three Months Ended March 31,	
	2017	2016
Net loss	\$ (19,143)	\$ (7,059)
Other comprehensive income		
Unrealized gains on available-for-sale marketable securities	—	21
Total other comprehensive income	—	21
Comprehensive loss	\$ (19,143)	\$ (7,038)

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

**BELLEROPHON THERAPEUTICS, INC.**  
**CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY (UNAUDITED)**  
(in thousands except share and per share data)

	Common Stock		Additional Paid in Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
December 31, 2016	31,702,624	\$ 317	\$ 142,167	\$ —	\$ (124,492)	\$ 17,992
Net loss	—	—	—	—	(19,143)	(19,143)
Other comprehensive income	—	—	—	—	—	—
Warrant exercises	648,586	7	1,215	—	—	1,222
Stock-based compensation	637,473	6	723	—	—	729
March 31, 2017	32,988,683	\$ 330	\$ 144,105	\$ —	\$ (143,635)	\$ 800

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

**BELLEROPHON THERAPEUTICS, INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)**  
(in thousands)

	Three Months Ended March 31,	
	2017	2016
<b>Cash flows from operating activities:</b>		
Net loss	\$ (19,143)	\$ (7,059)
Adjustments to reconcile net loss to net cash used in operating activities:		
Change in fair value of common stock warrant liability	14,387	—
Stock based compensation	729	601
Depreciation	99	104
Accretion and amortization of discounts and premiums on marketable securities, net	—	15
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(111)	(342)
Other non-current assets	582	716
Accounts payable, accrued research and development, and accrued expenses	(223)	(739)
Amounts due to Ikaria, Inc.	23	11
Net cash used in operating activities	(3,657)	(6,693)
<b>Cash flows from investing activities:</b>		
Capital expenditures	—	(22)
Purchase of marketable securities	—	—
Proceeds from sale of marketable securities	2,458	1,725
Net cash provided by investing activities	2,458	1,703
<b>Cash flows from financing activities:</b>		
Proceeds received from exercise of warrants	520	—
Payment of offering expenses related to the secondary offering	(235)	—
Net cash provided by financing activities	285	—
Net change in cash and cash equivalents	(914)	(4,990)
Cash and cash equivalents at beginning of period	14,453	6,260
Cash and cash equivalents at end of period	\$ 13,539	\$ 1,270
<b>Non-cash financing activities:</b>		
Conversion of warrant liability to common stock upon exercise of warrants	\$ 702	\$ —
<b>Non-cash investing activities:</b>		
Change in unrealized holding gains on marketable securities, net	\$ —	\$ 21

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

**BELLEROPHON THERAPEUTICS, INC.**  
**NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)**

**(1) Organization and Nature of the Business**

Bellerophon Therapeutics, Inc., or the Company, is a clinical-stage therapeutics company focused on developing innovative products at the intersection of drugs and devices that address significant unmet medical needs in the treatment of cardiopulmonary diseases. The focus of the Company's clinical program is the continued development of its nitric oxide therapy for patients with pulmonary hypertension, or PH, using its proprietary delivery system, INOpulse, with pulmonary arterial hypertension, or PAH, representing the lead indication. The Company has three wholly-owned subsidiaries: Bellerophon BCM LLC, a Delaware limited liability company; Bellerophon Pulse Technologies LLC, a Delaware limited liability company; and Bellerophon Services, Inc., a Delaware corporation.

The Company's business is subject to significant risks and uncertainties, including but not limited to:

- The risk that the Company will not achieve success in its research and development efforts, including clinical trials conducted by it or its potential collaborative partners.
- The expectation that the Company will experience operating losses for the next several years.
- Decisions by regulatory authorities regarding whether and when to approve the Company's regulatory applications as well as their decisions regarding labeling and other matters which could affect the commercial potential of the Company's products or product candidates.
- The risk that the Company will fail to obtain adequate financing to meet its future operational and capital needs.
- The risk that the Company will be unable to obtain additional funds on a timely basis and hence there will be substantial doubt about its ability to continue as a going concern.
- The risk that key personnel will leave the Company and/or that the Company will be unable to recruit and retain senior level officers to manage its business.

**(2) Summary of Significant Accounting Policies**

**(a) Basis of Presentation**

The accompanying unaudited condensed consolidated financial statements were prepared following the requirements of the Securities and Exchange Commission, or the SEC, for interim reporting. As permitted under those rules, certain footnotes or other financial information that are normally required by accounting principles generally accepted in the United States of America, or U.S. GAAP, can be condensed or omitted. The Company operates in one reportable segment and solely within the United States. Accordingly, no segment or geographic information has been presented.

The Company is responsible for the unaudited condensed consolidated financial statements. The condensed consolidated financial statements include all normal and recurring adjustments that are considered necessary for the fair presentation of the Company's financial position, results of operations, comprehensive loss and its cash flows for the periods presented. These condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements for the year ended December 31, 2016, included in the Company's Annual Report on Form 10-K for the year ended December 31, 2016. The results of operations for the three months ended March 31, 2017 for the Company are not necessarily indicative of the results expected for the full year.

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of costs and expenses during the reporting period, including accrued expenses, accrued research and development expenses, stock-based compensation, common stock warrant liabilities and income taxes. Actual results could differ from those estimates.

**(b) Cash and Cash Equivalents**

The Company considers all highly liquid investments with an original maturity date of three months or less to be cash equivalents. All investments with maturities of greater than three months from date of purchase are classified as available-for-sale marketable securities.

**(c) Stock-Based Compensation**

The Company accounts for its stock-based compensation in accordance with Accounting Standards Codification, or ASC, 718 *Compensation- Stock Compensation*, which establishes accounting for share-based awards, including stock options and restricted stock, exchanged for services and requires companies to expense the estimated fair value of these awards over the requisite service period. The Company recognizes stock-based compensation expense in operations based on the fair value of the award on the date of the grant. The resulting compensation expense is recognized on a straight-line basis over the requisite service period or sooner if the awards immediately vest. The Company determines the fair value of stock options issued using a Black-Scholes-Merton option pricing model. Certain assumptions used in the model include expected volatility, dividend yield, risk-free interest rate, and expected term. For restricted stock, the fair value is the closing market price per share on the grant date. See Note 8 - Stock-Based Compensation for a description of these assumptions.

**(d) Common Stock Warrant Liability**

The Company accounts for common stock warrants issued as freestanding instruments in accordance with applicable accounting guidance provided in ASC Topic 480, *Distinguishing Liabilities From Equity*, as either liabilities or as equity instruments depending on the specific terms of the warrant agreement. The Company classifies warrant liabilities on the consolidated balance sheet as long-term liabilities, which are revalued at each balance sheet date subsequent to the initial issuance. Changes in the fair value of the warrants are reflected in the consolidated statement of operations as "Change in fair value of common stock warrant liability." The Company uses the Black-Scholes-Merton pricing model to value the related warrant liabilities. Certain assumptions used in the model include expected volatility, dividend yield, risk-free interest rate, and expected term. See Note 6 - Fair Value Measurements for a description of these assumptions.

**(e) Income Taxes**

The Company uses the asset and liability approach to account for income taxes as required by ASC 740, *Income Taxes*, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Valuation allowances are provided when necessary to reduce deferred tax assets to the amount expected to be realized, on a more likely than not basis. The Company recognizes the benefit of an uncertain tax position that it has taken or expects to take on income tax returns it files if such tax position is more likely than not to be sustained on examination by the taxing authorities, based on the technical merits of the position. These tax benefits are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate resolution.

The Company's estimated tax rate for 2017 excluding any benefits from any sales of net operating losses or research and development, or R&D, tax credits is expected to be zero because the Company expects to generate additional losses and currently has a full valuation allowance. The deferred tax assets balance before valuation allowance as of March 31, 2017 was approximately \$52.8 million. The valuation allowance is required until the Company has sufficient positive evidence of taxable income necessary to support realization of its deferred tax assets. The Company did not have material uncertain tax positions as of March 31, 2017.

**(f) Marketable Securities**

The Company's marketable securities consist of federally insured certificates of deposit classified as available-for-sale that are recorded at amortized cost, which approximates fair value, and corporate or agency bonds classified as available-for-sale that are recorded at fair value. Unrealized gains and losses are reported as accumulated other comprehensive (loss) income, except for losses from impairments which are determined to be other-than-temporary. Realized gains and losses, and declines in value judged to be other-than-temporary on available-for-sale securities are included in the determination of net loss and are included in interest income, at which time the average cost basis of these securities are adjusted to fair value. Fair values are based on quoted market prices at the reporting date. Interest on available-for-sale securities are included in interest income.

### ***(g) Research and Development Expense***

Research and development costs are expensed as incurred. These expenses include the costs of the Company's proprietary research and development efforts, as well as costs incurred in connection with certain licensing arrangements. Upfront and milestone payments made to third parties in connection with research and development collaborations are expensed as incurred up to the point of regulatory approval. Payments made to third parties upon or subsequent to regulatory approval are capitalized and amortized over the remaining useful life of the related product. The Company also expenses the cost of purchased technology and equipment in the period of purchase if it believes that the technology or equipment has not demonstrated technological feasibility and it does not have an alternative future use. Nonrefundable advance payments for goods or services that will be used or rendered for future research and development activities are deferred and are recognized as research and development expense as the related goods are delivered or the related services are performed.

### ***(h) Recently Issued Accounting Pronouncements***

#### *Adopted*

In August 2014, the FASB issued ASU, 2014-15, "Presentation of Financial Statements - Going Concern: Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern." This guidance clarifies that an entity's management should evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued. The amendments in this update are effective for annual reporting periods ending after December 15, 2016, and annual and interim periods thereafter, and early application is permitted. The Company adopted ASU 2014-15 during the year ended December 31, 2016. Note 3 - Liquidity incorporates the disclosure requirements from the adoption of ASU 2014-15.

In March 2016, the FASB issued ASU 2016-09, "Compensation - Stock Compensation - Improvements to Employee Share-Based Payment Accounting" which provides for simplification of several aspects related to the accounting for share-based payment transactions. The provisions of ASU 2016-09 that are currently applicable to the Company are as follows: (a) forfeitures and (b) classification of employee taxes paid on the statement of cash flows when an employer withholds shares for tax-withholding purposes. This standard is effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. The Company adopted ASU 2016-09 during the quarter ended March 31, 2017. The adoption of this standard did not have a material impact on the Company's consolidated financial statements. The Company will continue to use its current method of estimated forfeitures each period rather than accounting for forfeitures as they occur. ASU 2016-09 requires the presentation of cash paid by an employer when directly withholding shares for tax-withholding purposes as a financing activity in the cash flow statement. The Company's historical accounting treatment is consistent with such guidance.

#### *Not Yet Adopted*

In May 2014, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, 2014-09, "Revenue from Contracts with Customers," which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The ASU will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. The new standard is effective for the Company on January 1, 2018. The standard permits the use of either the retrospective or cumulative effect transition method. The Company is assessing ASU 2014-09's impact and will adopt it when effective.

In January 2016, the FASB issued ASU 2016-01, "Financial Instruments - Overall - Recognition and Measurement of Financial Assets and Financial Liabilities," which addresses certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. This standard will be effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. The Company is assessing ASU 2016-01's impact and will adopt it when effective.

In February 2016, the FASB issued ASU 2016-02, "Leases," which is intended to improve financial reporting about leasing transactions. This standard requires a lessee to record on the balance sheet the assets and liabilities for the rights and obligations created by lease terms of more than 12 months. This standard will be effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company is assessing ASU 2016-02's impact and will adopt it when effective.

In August 2016, the FASB issued ASU 2016-15, "Statement of Cash Flows: Clarification of Certain Cash Receipts and Cash Payments", which eliminates the diversity in practice related to the classification of certain cash receipts and payments in the statement of cash flows, by adding or clarifying guidance on eight specific cash flow issues. ASU 2016-15 is effective for annual and interim reporting periods beginning after December 15, 2017 and early adoption is permitted. ASU 2016-15

provides for retrospective application for all periods presented. The Company is assessing ASU 2016-15's impact and will adopt it when effective.

In November 2016, the FASB issued ASU 2016-18 "Statement of Cash Flows: Restricted Cash", which eliminates the diversity in practice related to the inclusion of restricted cash in the statement of cash flows by requiring that a statement of cash flows include the change during the period in restricted cash when reconciling beginning-of-period and end-of-period total amounts shown on the statement of cash flows. ASU 2016-18 is effective for annual and interim reporting periods beginning after December 15, 2017 and early adoption is permitted. ASU 2016-18 provides for retrospective application for all periods presented. The Company is assessing ASU 2016-18's impact and will adopt it when effective.

### (3) Liquidity

In the course of its development activities, the Company has sustained operating losses and expects such losses to continue over the next several years. The Company expects to continue to incur significant expenses and operating losses for the foreseeable future as it continues the development and clinical trials of, and seeks regulatory approval for, its product candidates. The Company's primary uses of capital are, and it expects will continue to be, compensation and related expenses, third-party clinical research and development services, contract manufacturing services, laboratory and related supplies, clinical costs, legal and other regulatory expenses and general overhead costs.

The Company had cash and cash equivalents of \$13.5 million and marketable securities of \$3.1 million as of March 31, 2017.

The Company's existing cash and cash equivalents and marketable securities as of March 31, 2017 will be used primarily to fund the first of two INOpulse for PAH Phase 3 trials and to a lesser extent for the Phase 2 trials for PH-COPD and PH-IPF. In addition, as of March 31, 2017, the Company had \$6.2 million prepayments of research and development expenses related to its amended drug supply agreement with Ikaria and the clinical research organization it has partnered with for the first of the two Phase 3 clinical trials for INOpulse for PAH. The corresponding prepayments balance as of December 31, 2016 was \$7.2 million. These prepayment amounts are presented on the respective consolidated balance sheets as follows (in thousands):

	<u>March 31, 2017</u>	<u>December 31, 2016</u>
Prepaid expenses and other current assets	5,380	5,842
Other non-current assets	832	1,406
	<u>6,212</u>	<u>7,248</u>

On May 5, 2016, the Company filed a shelf registration statement with the SEC on Form S-3, which as amended became effective on May 23, 2016. The shelf registration will allow the Company to issue, from time to time at prices and on terms to be determined prior to the time of any such offering, up to \$30.0 million of any combination of the Company's common stock, preferred stock, debt securities, warrants, rights, purchase contracts or units, either individually or in units.

On May 27, 2016, the Company entered into a Sales Agreement, with FBR Capital Markets & Co. and MLV & Co. LLC, or the Distribution Agents, pursuant to which the Company may issue and sell shares of the Company's common stock having an aggregate offering price of up to \$5.7 million through the Distribution Agents. As of March 31, 2017, the Company had sold 1,025,793 shares for gross and net proceeds of \$2.2 million and \$2.1 million, respectively, under the Company's effective shelf registration statement on Form S-3 and the related prospectus supplement dated May 27, 2016 and filed with the SEC on May 27, 2016. Effective April 26, 2017, the Company terminated the Sales Agreement as it does not intend to utilize the Sales Agreement to raise additional capital.

On November 22, 2016, the Company filed a registration statement with the SEC, on Form S-1, which as amended became effective on November 22, 2016. On November 29, 2016, the Company completed the sale of 17,142,858 Class A Units consisting of an aggregate of 17,142,858 shares of its common stock and warrants exercisable for up to 17,142,858 shares of its common stock at a price of \$0.70 per Unit, or the Secondary Offering, resulting in net proceeds of \$10.9 million, after deducting placement fees of \$0.8 million and offering costs of \$0.3 million. Each warrant will have an exercise price per full share of common stock equal to \$0.80, will be immediately exercisable and will expire five years from the date on which such warrant becomes exercisable. The warrants require cash settlement by the Company under certain situations. During the quarter ended March 31, 2017, the Company received proceeds of \$0.5 million for the exercise of 648,586 warrants. Refer to Note 5 - Common Stock Warrant Liability for further details on the warrants.

On May 9, 2017, the Company entered into a Securities Purchase Agreement, or the Purchase Agreement, with a single institutional investor for the sale of 2,000,000 shares of its common stock at a purchase price of \$1.50 per share and

warrants to purchase up to an aggregate of 1,000,000 shares of its common stock, or the Direct Offering. The warrants will be initially exercisable commencing six months from the issuance date at an exercise price equal to \$1.50 per full share of common stock, subject to adjustments as provided under the terms of the warrants. The warrants are exercisable for five years from the initial exercise date. The closing of the sales of these securities under the Purchase Agreement is expected to occur on or about May 15, 2017. The aggregate gross proceeds for the Direct Offering will be approximately \$3.0 million and the net proceeds are estimated to be \$2.7 million.

The Company continues to pursue potential sources of funding, including equity financing.

The Company evaluated whether there are any conditions and events, considered in the aggregate, that raise substantial doubt about its ability to continue as a going concern within one year beyond the filing of this Quarterly Report on Form 10-Q.

Based on such evaluation, management believes that its existing cash and cash equivalents and marketable securities as of March 31, 2017, funds that will become available under the Direct Offering, and proceeds that will become available to the Company upon sale of its state net operating losses, or NOLs, and R&D tax credits under the State of New Jersey's Technology Business Tax Certificate Transfer Program will be sufficient to satisfy its operating cash needs for at least one year after the filing of this Quarterly Report on Form 10-Q.

The Technology Business Tax Certificate Transfer Program enables qualified, unprofitable New Jersey based technology or biotechnology companies to sell a percentage of NOLs and R&D tax credits to unrelated profitable corporations, subject to meeting certain eligibility criteria. Based on consideration of various factors, including application processing time and past trend of benefits made available under the program, management believes that it is probable that the Company's plans to sell NOLs can be effectively implemented to address the Company's short term financial needs. The Company participated in this program during November 2016 through the sale of R&D tax credits generated in the year ended December 31, 2015. The proceeds from this sale were recorded as Income tax benefit.

The Company's estimates and assumptions may prove to be wrong, and the Company may exhaust its capital resources sooner than expected. The process of testing product candidates in clinical trials is costly, and the timing of progress in clinical trials is uncertain. Because the Company's product candidates are in clinical development and the outcome of these efforts is uncertain, the Company cannot estimate the actual amounts that will be necessary to successfully complete the development and commercialization, if approved, of its product candidates or whether, or when, the Company may achieve profitability.

Until such time, if ever, as the Company can generate substantial product revenues, it expects to finance its cash needs through a combination of equity and debt offerings, existing working capital and funding from potential future collaboration arrangements. To the extent that the Company raises additional capital through the future sale of equity or debt, the ownership interest of its existing stockholders will be diluted, and the terms of such securities may include liquidation or other preferences or rights such as anti-dilution rights that adversely affect the rights of the Company's existing stockholders. If the Company raises additional funds through strategic partnerships in the future, it may have to relinquish valuable rights to its technologies, future revenue streams or product candidates or grant licenses on terms that may not be favorable to it. If the Company is unable to raise additional funds through equity or debt financings when needed, it may be required to delay, limit, reduce or terminate its product development or future commercialization efforts or grant rights to develop and market product candidates that it would otherwise prefer to develop and market itself.

If the Company is unable to raise capital when needed, it could be forced to delay, reduce or eliminate its product development programs or commercialization efforts. Moreover, if the Company is unable to obtain additional funds on a timely basis, there will be substantial doubt about its ability to continue as a going concern.

#### **(4) Marketable Securities**

The Company considers all of its investments to be available-for-sale. Marketable securities as of March 31, 2017 consist of the following (in thousands):

	<b>Amortized Cost</b>	<b>Gross Unrealized Gains</b>	<b>Gross Unrealized Losses</b>	<b>Fair Value</b>
Certificates of deposit	2,163	—	—	2,163
Corporate bonds	950	—	—	950
<b>Total</b>	<b>3,113</b>	<b>—</b>	<b>—</b>	<b>3,113</b>

Marketable securities as of December 31, 2016, consist of the following (in thousands):

	<b>Amortized Cost</b>	<b>Gross Unrealized Gains</b>	<b>Gross Unrealized Losses</b>	<b>Fair Value</b>
Certificates of deposit	3,619	—	—	3,619
Corporate bonds	1,952	—	—	1,952
<b>Total</b>	<b>5,571</b>	<b>—</b>	<b>—</b>	<b>5,571</b>

Maturities of marketable securities classified as available-for-sale were as follows at March 31, 2017 and December 31, 2016 (in thousands):

	<b>March 31, 2017</b>	<b>December 31, 2016</b>
Due within one year	3,113	5,571
Due after one year	—	—
	<b>3,113</b>	<b>5,571</b>

#### (5) Common Stock Warrant Liability

On November 29, 2016, the Company issued 17,142,858 warrants that were immediately exercisable and will expire five years from issuance at an exercise price of \$0.80 per share. As the warrants, under certain situations, could require cash settlement, the warrants were classified as liabilities and recorded at estimated fair value using a Black-Scholes-Merton pricing model. The following table summarizes warrant activity for the three months ended March 31, 2017 (fair value amount in thousands):

	<b>Warrants</b>	<b>Estimated Fair Value</b>
Warrants outstanding as of December 31, 2016	17,142,858	\$ 5,215
Exercises	(648,586)	(702)
Change in fair value of common stock warrant liability recognized in consolidated statement of operations	—	14,387
Warrants outstanding as of March 31, 2017	<b>16,494,272</b>	<b>\$ 18,900</b>

See Note 6 for determination of the fair value of common stock warrant liability.

#### (6) Fair Value Measurements

Assets and liabilities recorded at fair value on the balance sheets are categorized based upon the level of judgment associated with the inputs used to measure the fair value. Level inputs are as follows:

- Level 1 — Values are based on unadjusted quoted prices for identical assets or liabilities in an active market which the company has the ability to access at the measurement date.
- Level 2 — Values are based on quoted market prices in markets where trading occurs infrequently or whose values are based on quoted prices of instruments with similar attributes in active markets.

Level 3 — Values are based on prices or valuation techniques that require inputs that are both unobservable and significant to the overall fair value measurement. These inputs reflect management’s own assumptions about the assumptions a market participant would use in pricing the asset.

The following table summarizes fair value measurements by level at March 31, 2017 for assets and liabilities measured at fair value on a recurring basis (in thousands):

	Level 1	Level 2	Level 3	Total
Marketable securities	\$ —	\$ 3,113	\$ —	\$ 3,113
Common stock warrant liability	—	—	18,900	18,900

The following table summarizes fair value measurements by level at December 31, 2016 for assets and liabilities measured at fair value on a recurring basis (in thousands):

	Level 1	Level 2	Level 3	Total
Marketable securities	\$ —	\$ 5,571	\$ —	\$ 5,571
Common stock warrant liabilities	—	—	5,215	5,215

The Company uses a Black-Scholes-Merton option pricing model to value its common stock warrants. The significant unobservable inputs used in calculating the fair value of common stock warrants represent management’s best estimates and involve inherent uncertainties and the application of management’s judgment. For volatility, the Company uses comparable public companies as a basis for its expected volatility to calculate the fair value of common stock warrants due to its limited history as a public company. The risk-free interest rate is based on U.S. Treasury notes with a term approximating the expected term of the common stock warrant. Any significant increases or decreases in the unobservable inputs, with the exception of the risk-free interest rate, may result in significantly higher or lower fair value measurements.

The following are the assumptions used in estimating the fair value of warrants issued as of March 31, 2017 and December 31, 2016:

	March 31, 2017	December 31, 2016
Valuation assumptions:		
Risk-free interest rate	1.85%	1.91%
Expected volatility	88.21%	83.73%
Expected term (in years)	4.7	4.9
Dividend yield	—%	—%

## (7) Restructuring Charges

On July 27, 2015, the Company announced that its PRESERVATION I clinical trial for its BCM product candidate did not meet its primary or secondary endpoints. Following these results, on September 11, 2015, the Board of Directors of the Company approved a staff reduction plan in order to reduce operating expenses and conserve cash resources, or the Restructuring. The Restructuring included a workforce reduction of approximately 20 people and was completed by the end of 2015.

The Company offered severance benefits to the affected employees, including cash severance payments. Each affected employee’s eligibility for the severance benefits was contingent upon such employee’s execution (and non-revocation) of a separation agreement, which included a general release of claims against the Company.

The following table summarizes restructuring activities for the three months ended March 31, 2017 (in thousands):

	March 31, 2017
Opening balance (a)	\$ 110
Cash payments	(110)
Ending balance	\$ —

(a) Included in Accrued expenses.

## (8) Stock-Based Compensation

Determining the appropriate fair value of stock-based awards requires the input of subjective assumptions, including the fair value of the Company's units (prior to the date of the Company's initial public offering, or IPO) and for options, the expected term of the option and expected volatility. The Company uses the Black-Scholes-Merton option pricing model to value its stock option awards. The assumptions used in calculating the fair value of stock-based awards represent management's best estimates and involve inherent uncertainties and the application of management's judgment. As a result, if factors change and management uses different assumptions, stock-based compensation expense could be materially different for future awards. The expected term of stock options is estimated using the "simplified method," as the Company has no historical information to develop reasonable expectations about future exercise patterns and post-vesting employment termination behavior for its stock options grants. The simplified method is based on the average of the vesting tranches and the contractual life of each grant. For volatility, the Company uses comparable public companies as a basis for its expected volatility to calculate the fair value of option grants due to its limited history as a public company. The risk-free interest rate is based on U.S. Treasury notes with a term approximating the expected term of the option. The estimation of the number of stock awards that will ultimately vest requires judgment, and to the extent actual results or updated estimates differ from the Company's current estimates, such amounts will be recorded as an adjustment in the period in which estimates are revised.

### ***Bellerophon 2015 and 2014 Equity Incentive Plans***

During 2015, the Company adopted the 2015 Equity Incentive Plan, or the 2015 Plan, which provides for the grant of options, restricted stock and other forms of equity compensation.

As of March 31, 2017, there was approximately \$3.2 million of total unrecognized compensation expense related to unvested stock awards. This expense is expected to be recognized over a weighted-average period of 1.9 years.

No tax benefit was recognized during the three months ended March 31, 2017 and 2016 related to stock-based compensation expense since the Company incurred operating losses and has established a full valuation allowance to offset all the potential tax benefits associated with its deferred tax assets.

### *Options*

Compensation expense is measured based on the fair value of the option on the grant date and is recognized on a straight-line basis over the requisite service period, or sooner if vesting occurs sooner than on a straight-line basis. Options are forfeited if the employee ceases to be employed by the Company prior to vesting.

During the year ended December 31, 2014, the Company adopted the 2014 Equity Incentive Plan, or the 2014 Plan, which provided for the grant of options. Following the effectiveness of the Company's registration statement filed in connection with its IPO, no options may be granted under the 2014 Plan. The awards granted under the 2014 Plan generally have a vesting period of four years, of which 25% of the awards vest on the second anniversary of grant date, 25% vest on the third anniversary and the remaining 50% vest on the fourth anniversary of the grant date. The awards granted under the 2015 Plan have a vesting period of either three or four years, of which equal annual installments vest over the vesting period either beginning on the date of grant or on the one year anniversary of the date of grant.

There were no options issued during the three months ended March 31, 2017. The weighted average grant-date fair value of options issued during the three months ended 2016 was \$1.61. The following are the weighted average assumptions used in estimating the fair value of options issued during the three months ended March 31, 2016.

	<u>Three Months Ended March 31, 2016</u>
Valuation assumptions:	
Risk-free rate	1.38%
Expected volatility	81.58%
Expected term (years)	6.2
Dividend yield	—

A summary of option activity under the 2015 and 2014 Plans for the three months ended March 31, 2017 is presented below:

Bellerophon 2015 and 2014 Equity Incentive Plans						
	Options	Range of Exercise Price			Weighted Average Price	Weighted Average Remaining Contractual Life (in years)
Options outstanding as of December 31, 2016	3,189,881	\$ 0.49	-	13.28	\$ 3.08	9.4
Options outstanding as of March 31, 2017	3,189,881	\$ 0.49	-	13.28	\$ 3.08	9.1
Options vested and exercisable as of March 31, 2017	406,387	\$ 2.21	-	13.28	\$ 11.42	7.5

#### Restricted Stock

All restricted stock awards granted under the 2015 Plan as of March 31, 2017 were in relation to 2015 and 2016 incentives for employees and vest in full one year or less from the grant date.

A summary of restricted stock activity under the 2015 Plan for the three months ended March 31, 2017 is presented below:

Bellerophon 2015 Equity Incentive Plan				
	Shares	Weighted Average Fair Value	Aggregate Grant Date Fair Value (in millions)	Weighted Average Remaining Contractual Life (in years)
Restricted stock outstanding as of December 31, 2016	155,846	\$ 2.05	\$ 0.3	0.0
Granted	637,473	1.48	0.9	
Forfeited	(347,481)	(1.74)	(0.6)	
Restricted stock outstanding as of March 31, 2017	445,838	\$ 1.48	\$ 0.7	0.7

#### Ikaria Equity Incentive Plans prior to February 12, 2014

##### Options

In February 2014, prior to the Spin-Out, each Ikaria stock option, other than options held by non-accredited investors who were also not employees of Ikaria, was adjusted such that it became an option to acquire the same number of shares of Ikaria non-voting common stock as were subject to the Ikaria stock option, or an Adjusted Ikaria Option, and an option to acquire the same number of non-voting limited liability company units of the Company as the number of shares of Ikaria non-voting common stock that were subject to the Ikaria stock option, or a Bellerophon Option. There were 618,212 Bellerophon Options issued as a result of the adjustment of Ikaria stock options. The vesting of each Adjusted Ikaria Option and Bellerophon Option was fully accelerated on the date of the Spin-Out and all related compensation expense was recognized as an expense by Ikaria. The expiration date of the options was not modified.

Prior to and in connection with the Spin-Out, the exercise price of each Adjusted Ikaria Option and Bellerophon Option was adjusted by allocating the relative post Spin-Out estimated fair values of Ikaria and the Company in a ratio of 85% and 15%, respectively, to the original Ikaria option exercise price. The expiration date of the options was not modified.

A summary of option activity under the assumed Ikaria 2007 stock option plan and the assumed Ikaria 2010 long term incentive plan for the three months ended March 31, 2017, is presented below:

	Ikaria Equity Incentive Plans				Weighted Average Remaining Contractual Life (in years)
	Options	Range of Exercise Price	Weighted Average Price		
Options outstanding as of December 31, 2016	87,369	\$ 7.77 - 17.92	\$ 9.14		4.3
Forfeited	(118)	7.77 - 8.65	8.36		
Options outstanding as of March 31, 2017	87,251	\$ 7.77 - 17.92	\$ 9.14		4.0
Options vested and exercisable as of March 31, 2017	87,251	\$ 7.77 - 17.92	\$ 9.14		4.0

The intrinsic value of options outstanding, vested and exercisable as of March 31, 2017 was zero.

#### **Stock-Based Compensation Expense, Net of Estimated Forfeitures**

The following table summarizes the stock-based compensation expense by the unaudited condensed consolidated statement of operations line items for the three months ended March 31, 2017 and 2016 (in thousands):

	Three Months Ended March 31,	
	2017	2016
Research and development	\$ 291	\$ 216
General and administrative	438	385
Total expense	\$ 729	\$ 601

#### **(9) Income Taxes**

The effective tax rate for each of the three months ended March 31, 2017 and 2016 was 0.0%. For the three months ended March 31, 2017 and 2016, the effective rate was lower than the federal statutory rates primarily due to the losses incurred and the full valuation allowance on deferred tax assets.

As of March 31, 2017, there were no material uncertain tax positions. There are no tax positions for which a material change in any unrecognized tax benefit liability is reasonably possible in the next 12 months.

#### **(10) Net Loss Per Share**

Basic net loss per share is calculated by dividing net loss by the weighted average number of shares outstanding during the period, as applicable. Diluted net loss per share is calculated by dividing net loss by the weighted average number of shares outstanding, adjusted to reflect potentially dilutive securities (options) using the treasury stock method, except when the effect would be anti-dilutive.

The Company reported a net loss for the three months ended March 31, 2017 and 2016, therefore diluted net loss per share is the same as the basic net loss per share.

As of March 31, 2017, the Company had 3,277,132 options to purchase shares, 445,838 restricted shares and 16,494,272 warrants to purchase shares outstanding that have been excluded from the computation of diluted weighted average shares outstanding, because such securities had an anti-dilutive impact due to the loss reported.

#### **(11) Commitments and Contingencies**

##### *Legal Proceedings*

The Company periodically becomes subject to legal proceedings and claims arising in connection with its business. The ultimate legal and financial liability of the Company in respect to all proceedings, claims and lawsuits, pending or threatened, cannot be estimated with any certainty.

As of this report, the Company is not aware of any proceeding, claim or litigation, pending or threatened, that could, individually or in the aggregate, have a material adverse effect on the Company's business, operating results, financial condition and/or liquidity.

## **(12) Subsequent Events**

On May 9, 2017, the Company entered into a Securities Purchase Agreement, or the Purchase Agreement, with a single institutional investor, or the investor, for the sale of 2,000,000 shares of its common stock at a purchase price of \$1.50 per share and warrants to purchase up to an aggregate of 1,000,000 shares of its common stock, or the Direct Offering. The warrants will be initially exercisable commencing six months from the issuance date at an exercise price equal to \$1.50 per full share of common stock, subject to adjustments as provided under the terms of the warrants. The warrants are exercisable for five years from the initial exercise date. In addition, the Company will issue the placement agent of the Direct Offering, warrants to purchase up to 60,000 shares. The placement agent warrants will have substantially the same terms as the warrants issued to the investor, except that the placement agent warrants will have an exercise price equal to \$1.875 and will be exercisable for five years from the date of the closing of this offering. The closing of the sales of these securities under the Purchase Agreement is expected to occur on or about May 15, 2017. The aggregate gross proceeds for the Direct Offering will be approximately \$3.0 million and the net proceeds are estimated to be \$2.7 million.

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

*You should read the following discussion and analysis of our financial condition and results of operations together with our condensed consolidated financial statements and the related notes appearing elsewhere in this Quarterly Report on Form 10-Q. Some of the information contained in this discussion and analysis or set forth elsewhere in this Quarterly Report on Form 10-Q, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. You should read the "Risk Factors" section in Part II—Item 1A. of this Quarterly Report on Form 10-Q and in Part I—Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2016 for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.*

### **Overview**

#### **Business**

We are a clinical-stage therapeutics company focused on developing innovative products at the intersection of drugs and devices that address significant unmet medical needs in the treatment of cardiopulmonary diseases. Our focus is the continued development of our nitric oxide therapy for patients with pulmonary hypertension, or PH, using our proprietary delivery system, INOpulse, with pulmonary arterial hypertension, or PAH, representing the lead indication. Our INOpulse platform is based on our proprietary pulsatile nitric oxide delivery device.

In February 2016, we announced positive data from the final analysis of our Phase 2 long-term extension clinical trial of INOpulse for PAH, which was Part 2 of our Phase 2 clinical trial of INOpulse for PAH. The data indicates a sustainability of benefit to PAH patients who received INOpulse therapy at the 75 mcg/kg of ideal body weight/hour dose for an average of greater than 12 hours per day and were on long-term oxygen therapy, or LTOT. After reaching agreement with the U.S. Food and Drug Administration, or FDA, and the European Medicines Agency, or EMA, on our Phase 3 protocol, we are moving forward with Phase 3 development. In September 2015, the FDA issued a Special Protocol Assessment, or SPA, for our Phase 3 PAH program for INOpulse, which will include two confirmatory clinical trials. The first of the two Phase 3 trials, or INOvation-1, has been initiated. During January 2017, we received confirmation from the FDA of its acceptance of all of our proposed modifications to our Phase 3 program. Under the newly modified Phase 3 program, the ongoing one-year INOvation-1 study, and a second confirmatory randomized withdrawal study with approximately 40 patients who will be crossing over from the INOvation-1 study, can serve as the two adequate and well-controlled studies to support a NDA filing for INOpulse in PAH subjects on LTOT. Both studies include an interim analysis approximately half-way through each study to assess for efficacy and futility. The interim analysis for the INOvation-1 study also includes a potential sample size reassessment.

We completed a randomized, placebo-controlled, double-blind, dose-confirmation Phase 2 clinical trial of INOpulse for PH-COPD in July 2014. We received results from this trial, and have initiated further Phase 2 testing to demonstrate the potential benefit on exercise capacity. In September 2015, an oral presentation of late-breaking data from a clinical trial sponsored by us was presented at the European Respiratory Society International Congress 2015 in Amsterdam. The data showed that INOpulse improved vasodilation in patients with PH-COPD. In July 2016, the results were published in the International Journal of COPD in an article titled "Pulmonary vascular effects of pulsed inhaled nitric oxide in COPD patients

with pulmonary hypertension." Building upon this and other work we have done over recent quarters, we have initiated Phase 2 testing for the use of the INOpulse device for PH-COPD patients to evaluate the potential benefit of chronic use on exercise capacity.

We have begun clinical testing of the INOpulse therapy to treat PH associated with idiopathic pulmonary fibrosis, or PH-IPF, based on feedback from the medical community and the large unmet medical need for this condition. During May 2017, we announced that clinical data from our Phase 2 study showed that INOpulse was associated with clinically meaningful improvements in hemodynamics and exercise capacity in difficult-to-treat PH-IPF patients. Detailed study data, including for the composite endpoints and respiratory imaging, will be presented in a poster at the American Thoracic Society 113th International Conference, on Sunday, May 21, 2017 in Washington, D.C. In addition, other opportunities for the application of our INOpulse platform include the following indications: chronic thromboembolic PH, or CTEPH, PH associated with sarcoidosis and PH associated with pulmonary edema from high altitude sickness.

We have devoted all of our resources to our therapeutic discovery and development efforts, including conducting clinical trials for our product candidates, protecting our intellectual property and the general and administrative support of these operations. We have devoted significant time and resources to developing and optimizing our drug delivery system, INOpulse, which operates through the administration of nitric oxide as brief, controlled pulses that are timed to occur at the beginning of a breath. In addition, in prior years, we incurred significant costs to scale up manufacturing of Bioabsorbable Cardiac Matrix, or BCM, to support our clinical trials.

To date, we have generated no revenue from product sales. We expect that it will be several years before we commercialize a product candidate, if ever.

## **Financial Operations Overview**

### **Revenue**

To date, we have not generated any revenue from product sales and may not generate any revenue from product sales for the next several years, if ever. In the future, we may generate revenue from a combination of product sales, license fees and milestone payments in connection with strategic partnerships, and royalties from the sale of products developed under licenses of our intellectual property. Our ability to generate revenue and become profitable depends primarily on our ability to successfully develop and commercialize or partner our product candidates as well as any product candidates we may advance in the future. We expect that any revenue we may generate will fluctuate from quarter to quarter as a result of the timing and amount of any payments we may receive under future partnerships, if any, and from sales of any products we successfully develop and commercialize, if any. If we fail to complete the development of any of our product candidates currently in clinical development or any future product candidates in a timely manner, or to obtain regulatory approval for such product candidates, our ability to generate future revenue, and our business, results of operations, financial condition and cash flows and future prospects would be materially adversely affected.

### **Research and Development Expenses**

Research and development expenses consist of costs incurred in connection with the development of our product candidates, including upfront and development milestone payments, related to in-licensed product candidates and technologies.

Research and development expenses primarily consist of:

- employee-related expenses, including salary, benefits and stock-based compensation expense;
- expenses incurred under agreements with contract research organizations, investigative sites that conduct our clinical trials and consultants that conduct a portion of our pre-clinical studies;
- expenses relating to vendors in connection with research and development activities;
- the cost of acquiring and manufacturing clinical trial materials;
- facilities, depreciation and allocated expenses;
- lab supplies, reagents, active pharmaceutical ingredients and other direct and indirect costs in support of our pre-clinical and clinical activities;
- device development and drug manufacturing engineering;
- license fees related to in-licensed products and technology; and
- costs associated with non-clinical activities and regulatory approvals.

We expense research and development costs as incurred.

Conducting a significant amount of research and development is central to our business model. Product candidates in late stages of clinical development generally have higher development costs than those in earlier stages of clinical development primarily due to the increased size and duration of late-stage clinical trials. Subject to the availability of requisite financing, we plan to increase our research and development expenses for ongoing clinical programs for the foreseeable future as we seek to continue multiple clinical trials for our product candidates and seek to identify additional early-stage product candidates.

We track external research and development expenses and personnel expenses on a program-by-program basis. We use our employee and infrastructure resources, including regulatory, quality, clinical development and clinical operations, across our clinical development programs and have included these expenses in research and development infrastructure. Research and development laboratory expenses are also not allocated to a specific program and are included in research and development infrastructure. Engineering activities related to INOpulse and the manufacture of cylinders related to INOpulse are included in INOpulse engineering.

#### *INOpulse for PAH*

We completed a randomized, placebo-controlled, double-blind Phase 2 clinical trial of INOpulse for PAH in October 2014. The goal of the trial was to determine the safety, tolerability and efficacy of two different doses of INOpulse for PAH. In February 2016, we performed the final analysis of our Phase 2 long-term extension clinical trial of INOpulse for PAH, which is Part 2 of our Phase 2 clinical trial of INOpulse for PAH, which reinforced the results from Part 1 of our Phase 2 clinical trial of INOpulse for PAH. After reaching agreement with the FDA and the EMA on our Phase 3 protocol, we moved forward with Phase 3 development.

#### *INOpulse for PH-COPD*

We completed a randomized, placebo-controlled, double-blind, dose-confirmation Phase 2 clinical trial of INOpulse for PH-COPD in July 2014. We received results from this trial, and have initiated Phase 2 testing for the use of the INOpulse device for PH-COPD patients to evaluate the potential benefit of chronic use on exercise capacity, with the first patient enrolled in October 2016.

#### *INOpulse for PH-IPF*

We initiated our Phase 2 studies in PH-IPF in 2016 consisting of an exploratory acute hemodynamic study followed by exercise capacity. During May 2017, we announced that clinical data from our Phase 2 study showed that INOpulse was associated with clinically meaningful improvements in hemodynamics and exercise capacity in difficult-to-treat PH-IPF patients. Detailed study data, including for the composite endpoints and respiratory imaging, will be presented in a poster at the American Thoracic Society 113th International Conference, on Sunday, May 21, 2017 in Washington, D.C.

#### *BCM*

In December 2011, we initiated a clinical trial of BCM, which we refer to as our PRESERVATION I trial, in December 2011, and completed enrollment in December 2014. Top-line results from the randomized, double-blind, placebo-controlled clinical trial were announced in July 2015. Following the results, we are considering further exploratory work but we do not intend to proceed with further clinical development of BCM at this point until and unless we can determine an alternative path forward.

#### *Research and Development Infrastructure*

We invest in regulatory, quality, clinical development and clinical operations activities, which are expensed as incurred. These activities primarily support our clinical development programs.

#### *INOpulse Engineering*

We have invested a significant amount of funds in INOpulse, which is configured to be highly portable and compatible with available modes of LTOT via nasal cannula delivery. Our Phase 2 clinical trials of INOpulse for PAH and INOpulse for PH-COPD utilized the first generation INOpulse DS device. We believe our second generation INOpulse device, as well as a custom triple-lumen cannula, will significantly improve several characteristics of our INOpulse delivery system. We have also invested in design and engineering technology, through Ikaria, for the manufacture of our drug cartridges. In February 2015, we entered into an agreement with Flextronics Medical Sales and Marketing Ltd., a subsidiary of Flextronics International Ltd., or Flextronics, to manufacture and service the INOpulse devices that we are using in our ongoing clinical trials of INOpulse for PAH and INOpulse for PH-COPD and PH-IPF.

It is difficult to determine with certainty the duration and completion costs of our current or any future pre-clinical programs and any of our current or future clinical trials and any future product candidates we may advance, or if, when or to what extent we will generate revenue from the commercialization and sale of any of our product candidates that obtain regulatory approval. We may never succeed in achieving regulatory approval for any of our product candidates. The duration, costs and timing of clinical trials and development of our product candidates will depend on a variety of factors, including the uncertainties of any future clinical trials and pre-clinical studies, uncertainties in clinical trial enrollment rate and significant and changing government regulation. In addition, the probability of success for each product candidate will depend on numerous factors, including competition, manufacturing capability and commercial viability. A change in the outcome of any of these variables with respect to the development of a product candidate could change significantly the costs and timing associated with the development of that product candidate. For example, if the FDA or other regulatory authority were to require us to conduct clinical trials beyond those that we currently anticipate will be required for the completion of clinical development of a product candidate, or if we experience significant delays in enrollment in any of our clinical trials, we could be required to expend significant additional financial resources and time with respect to the development of that product candidate. We will determine which programs to pursue and how much to fund each program in response to the scientific and clinical success of each product candidate, as well as an assessment of each product candidate's commercial potential, including the likelihood of regulatory approval on a timely basis.

### **General and Administrative Expenses**

General and administrative expenses include salaries and costs related to executive, finance, and administrative support functions, patent filing, patent prosecution, professional fees for legal, insurance, consulting, investor relations, human resources, information technology and auditing and tax services not otherwise included in research and development expenses.

### **Results of Operations**

#### **Comparison of Three Months Ended March 31, 2017 and 2016**

The following table summarizes our results of operations for the three months ended March 31, 2017 and 2016.

<b>(Dollar amounts in thousands)</b>	<b>Three Months Ended March 31,</b>		<b>\$ Change</b>	<b>% Change</b>
	<b>2017</b>	<b>2016</b>		
<b>Research and development expenses:</b>				
BCM	\$ 26	\$ 320	\$ (294)	(92)%
PAH	1,641	3,029	(1,388)	(46)%
PH-COPD and PH-IPF	29	14	15	107 %
Clinical programs	1,696	3,363	(1,667)	(50)%
Research and development infrastructure	1,355	1,018	337	33 %
INOpulse engineering	286	732	(446)	(61)%
Total research and development expenses	3,337	5,113	(1,776)	(35)%
General and administrative expenses	1,446	1,976	(530)	(27)%
Total operating expenses	4,783	7,089	(2,306)	(33)%
Loss from operations	(4,783)	(7,089)	2,306	(33)%
Change in fair value of common stock warrant liability	(14,387)	—	(14,387)	n.a.
Interest and other income	27	30	(3)	(10)%
Net loss	\$ (19,143)	\$ (7,059)	\$ (12,084)	171 %

**Total Operating Expenses.** Total operating expenses for the three months ended March 31, 2017 were \$4.8 million compared to \$7.1 million for the three months ended March 31, 2016, a decrease of \$2.3 million, or 33%. This decrease was primarily due to reductions in research and development expenses pertaining to our development of INOpulse for PAH and a decrease in general and administrative expenses.

**Research and Development Expenses.** Total research and development expenses for the three months ended March 31, 2017 were \$3.3 million compared to \$5.1 million for the three months ended March 31, 2016, a decrease of \$1.8 million, or 35%. Total research and development expenses consisted of the following:

- BCM research and development expenses for the three months ended March 31, 2017 were \$26.0 thousand compared to \$0.3 million for the three months ended March 31, 2016, a decrease of \$0.3 million, or 92%. The decrease was driven by a reduction in spend on manufacturing costs.
- PAH research and development expenses were \$1.6 million for the three months ended March 31, 2017, compared to \$3.0 million for the three months ended March 31, 2016, a decrease of \$1.4 million, or 46%. The decrease was primarily driven by the completion of the Phase 2 clinical trial in 2016.
- PH-COPD and PH-IPF research and development expenses were \$29 thousand and \$14 thousand for the three months ended March 31, 2017 and 2016, respectively.
- Research and development infrastructure expenses for the three months ended March 31, 2017 were \$1.4 million compared to \$1.0 million for the three months ended March 31, 2016, an increase of \$0.3 million, or 33%. The increase was primarily due to increased personnel costs.
- INOpulse engineering expenses for the three months ended March 31, 2017 were \$0.3 million compared to \$0.7 million for the three months ended March 31, 2016, a decrease of \$0.4 million, or 61%. The decrease was primarily the result of a reduction in development costs for the INOpulse device and triple-lumen cannula.

**General and Administrative Expenses.** General and administrative expenses for the three months ended March 31, 2017 were \$1.4 million compared to \$2.0 million for the three months ended March 31, 2016, a decrease of \$0.5 million, or 27%. The decrease was primarily due to reduction in personnel costs, franchise taxes and consulting costs.

**Change in fair value of common stock warrant liability.** Change in fair value of common stock warrant liability for the three months ended March 31, 2017 was \$(14.4) million and we had no change in fair value of common stock warrant liability for the three months ended March 31, 2016 as the warrants were issued in November 2016.

## Liquidity and Capital Resources

In the course of our development activities, we have sustained operating losses and expect such losses to continue over the next several years. We expect to continue to incur significant expenses and operating losses for the foreseeable future as we continue to develop, conduct clinical trials and seek regulatory approval for our product candidates. Our primary uses of capital are, and we expect will continue to be, compensation and related expenses, third-party clinical research and development services, contract manufacturing services, laboratory and related supplies, clinical costs, legal and other regulatory expenses and general overhead costs.

If we obtain regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses. We do not have a sales, marketing, manufacture or distribution infrastructure for a pharmaceutical product. To develop a commercial infrastructure, we will have to invest financial and management resources, some of which would have to be deployed prior to having any certainty of marketing approval.

We had cash and cash equivalents of \$13.5 million and marketable securities of \$3.1 million as of March 31, 2017. Our existing cash and cash equivalents and marketable securities as of March 31, 2017 will be used primarily to fund the first of two INOpulse for PAH Phase 3 trials and to a lesser extent for the Phase 2 trials for PH-COPD and PH-IPF. As of March 31, 2017, we had \$6.2 million prepayments of research and development expenses related to our amended drug supply agreement with Ikaria and the clinical research organization we have partnered with for the first of the two Phase 3 clinical trials for INOpulse for PAH. The corresponding prepayments balance as of December 31, 2016 was \$7.2 million.

On May 27, 2016, we entered into the Sales Agreement, with the Distribution Agents, pursuant to which we may issue and sell shares of our common stock having an aggregate offering price of up to \$5.7 million through the Distribution Agents. As of March 31, 2017, we sold 1,025,793 shares for gross and net proceeds of \$2.2 million and \$2.1 million, respectively, under our effective shelf registration statement on Form S-3 and the related prospectus supplement dated May 27, 2016 and filed with the SEC on May 27, 2016. Effective April 26, 2017, we terminated the Sales Agreement as we do not intend to utilize the Sales Agreement to raise additional capital.

On November 22, 2016, we filed a registration statement with the SEC, on Form S-1, which as amended became effective on November 22, 2016. On November 29, 2016, we completed the sale of 17,142,858 Class A Units consisting of an aggregate of 17,142,858 shares of our common stock and warrants exercisable for up to 17,142,858 shares of our common stock at a price of \$0.70 per Unit, or the Secondary Offering, resulting in net proceeds of \$10.9 million, after deducting placement fees of \$0.8 million and offering costs of \$0.3 million. Each warrant will have an exercise price per full share of common stock equal to \$0.80, will be immediately exercisable and will expire five years from the date on which such warrant becomes exercisable. The warrants require cash settlement by us under certain situations. During the quarter ended March 31, 2017, we received proceeds of \$0.5 million for the exercise of 648,586 warrants.

On May 9, 2017, we entered into a Securities Purchase Agreement, or the Purchase Agreement, with a single institutional investor for the sale of 2,000,000 shares of our common stock at a purchase price of \$1.50 per share and warrants to purchase up to an aggregate of 1,000,000 shares of our common stock, or the Direct Offering. The warrants will be initially exercisable commencing six months from the issuance date at an exercise price equal to \$1.50 per full share of common stock, subject to adjustments as provided under the terms of the warrants. The warrants are exercisable for five years from the initial exercise date. The closing of the sales of these securities under the Purchase Agreement is expected to occur on or about May 15, 2017. The aggregate gross proceeds for the Direct Offering will be approximately \$3.0 million and the net proceeds are estimated to be \$2.7 million.

We continue to pursue potential sources of funding, including equity financing.

We have evaluated whether there are any conditions and events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern within one year beyond the filing of this Quarterly Report on Form 10-Q.

Based on such evaluation, we believe that our existing cash and cash equivalents and marketable securities as of March 31, 2017, funds that will become available under the Direct Offering, and proceeds that will become available to us upon sale of our state net operating losses, or NOLs, and R&D tax credits under the State of New Jersey's Technology Business Tax Certificate Transfer Program will be sufficient to satisfy our operating cash needs for at least one year after the filing of this Quarterly Report on Form 10-Q.

The Technology Business Tax Certificate Transfer Program enables qualified, unprofitable New Jersey based technology or biotechnology companies to sell a percentage of NOLs and R&D tax credits to unrelated profitable corporations, subject to meeting certain eligibility criteria. Based on consideration of various factors, including application processing time and past trend of benefits made available under the program, we believe that it is probable that our plans to sell our NOLs can be effectively implemented to address our short term financial needs. We participated in this program during November 2016 through the sale of R&D tax credits generated in the year ended December 31, 2015. The proceeds from this sale were recorded as Income tax benefit.

We have based our estimates on assumptions that may prove to be wrong, and we may exhaust our capital resources sooner than we expect. In addition, the process of testing product candidates in clinical trials is costly, and the timing of progress in clinical trials is uncertain. Because our product candidates are in clinical development and the outcome of these efforts is uncertain, we cannot estimate the actual amounts that will be necessary to successfully complete the development and commercialization of our product candidates or whether, or when, we may achieve profitability. Our future capital requirements will depend on many factors, including:

- progress and cost of our clinical trials and other research and development activities;
- our ability to manufacture sufficient supply of our product candidates and the costs thereof;
- the cost and timing of seeking regulatory approvals;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution for any of our product candidates for which we receive marketing approval;
- the number and development requirements of any other product candidates we pursue;
- our ability to enter into collaborative agreements and achieve milestones under those agreements;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the cost of filing, prosecuting, defending and enforcing patent applications, claims, patents and other intellectual property rights; and
- the extent to which we acquire or in-license other products and technologies.

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of equity and debt offerings, existing working capital and funding from potential future collaboration arrangements. To the extent that we raise additional capital through the future sale of equity or debt, the ownership interest of our existing stockholders will be diluted, and the terms of such securities may include liquidation or other preferences or rights such as anti-dilution rights that adversely affect the rights of our existing stockholders. If we raise additional funds through strategic partnerships in the future, we may have to relinquish valuable rights to our technologies, future revenue streams or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

If we are unable to raise capital when needed, we could be forced to delay, reduce or eliminate our product development programs or commercialization efforts. 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.

### **Cash Flows**

The following table summarizes our cash flows for the three months ended March 31, 2017 and 2016:

<b>(Dollar amounts in thousands)</b>	<b>Three Months Ended March 31,</b>	
	<b>2017</b>	<b>2016</b>
Operating activities	\$ (3,657)	\$ (6,693)
Investing activities	2,458	1,703
Financing activities	285	—
Net change in cash and cash equivalents	\$ (914)	\$ (4,990)

#### *Net Cash Used in Operating Activities*

Cash used in operating activities for three months ended March 31, 2017 was \$3.7 million compared to \$6.7 million for the three months ended March 31, 2016, a decrease of \$3.0 million, or 45%. The decrease in cash used in operating activities was primarily due to reduced operating expenses.

#### *Net Cash Provided by Investing Activities*

Cash provided by investing activities for the three months ended March 31, 2017 was \$2.5 million compared to \$1.7 million for the three months ended March 31, 2016, primarily due to increased proceeds from the sale of marketable securities.

#### *Net Cash Provided by Financing Activities*

Cash provided by financing activities for three months ended March 31, 2017 was \$0.3 million which included the proceeds from warrant exercises offset by the payment of issuance costs related to the 2016 secondary offering. There was no cash provided by financing activities for the three months ended March 31, 2016.

### **Contractual Obligations and Commitments**

There were no material changes, outside the ordinary course of business, in our outstanding contractual obligations from those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2016.

In the course of our normal business operations, we also enter into agreements with contract service providers and others to assist in the performance of our research and development and manufacturing activities. We can elect to discontinue the work under these contracts and purchase orders at any time with notice, and such contracts and purchase orders do not contain minimum purchase obligations.

### **Off-Balance Sheet Arrangements**

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

## **Critical Accounting Policies and Significant Judgments and Estimates**

Our management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses and the disclosure of contingent assets and liabilities in our financial statements. On an ongoing basis, we evaluate our estimates and judgments, including those related to research and development expense, and stock-based compensation. We base our estimates on historical experience, known trends and events and various other factors that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

During the three months ended March 31, 2017, there were no material changes to our critical accounting policies. Our critical accounting policies are described under Management's Discussion and Analysis of Financial Condition and Results of Operations in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016.

### **Item 3. Quantitative and Qualitative Disclosures About Market Risk.**

We are exposed to market risk related to changes in interest rates. As of March 31, 2017, we had cash and cash equivalents of \$13.5 million, consisting primarily of demand deposits with U.S. banking institutions and marketable securities of \$3.1 million. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates, particularly because our investments are in cash and cash equivalents, federally insured certificates of deposit and corporate or agency bonds rated A or better. Due to the nature of our deposits and the low risk profile of our investments, an immediate 10% change in interest rates would not have a material effect on the fair market value of our deposits.

### **Item 4. Controls and Procedures.**

#### **Evaluation of Disclosure Controls and Procedures**

Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2017. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of March 31, 2017, our principal executive officer and principal financial officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

#### **Changes in Internal Control Over Financial Reporting**

No change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) occurred during the fiscal quarter ended March 31, 2017 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

## PART II. OTHER INFORMATION

### Item 1. Legal Proceedings.

We are currently not a party to any material legal proceedings.

### Item 1A. Risk Factors.

There have been no material changes to our risk factors contained in our Annual Report on Form 10-K for the year ended December 31, 2016. For a further discussion of our Risk Factors, refer to the "Risk Factors" discussion contained in our Annual Report on Form 10-K for the year ended December 31, 2016.

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

#### Use of Proceeds

We effected the initial public offering of our common stock through a Registration Statement on Form S-1 (File No. 333-201474) that was declared effective by the SEC on February 13, 2015. On February 19, 2015, we completed the sale of 5,000,000 shares of common stock in our initial public offering, or IPO, at a price to the public of \$12.00 per share, resulting in net proceeds to us of \$51.9 million, after deducting underwriting discounts and commissions of \$4.2 million and offering costs of \$3.9 million. As of March 31, 2017, we have used approximately \$48.3 million of the net proceeds of our IPO to fund our Phase 3 clinical development of INOpulse for PAH and for working capital and other general corporate purposes. As of March 31, 2017, we have invested the balance of the net proceeds from the offering in a variety of capital preservation investments, including demand deposits with U.S. banking institutions, federally insured certificates of deposit and corporate or agency bonds rated A or better. There has been no material change in our planned use of the balance of the net proceeds from the offering as described in our final prospectus filed with the SEC pursuant to Rule 424(b) under the Securities Act of 1933, as amended.

### Item 3. Defaults Upon Senior Securities.

None.

### Item 4. Mine Safety Disclosures.

Not applicable.

### Item 5. Other Information.

None.

### Item 6. Exhibits.

The exhibits listed in the Exhibit Index to this Quarterly Report on Form 10-Q are 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.

BELLEROPHON THERAPEUTICS, INC.

Date: May 15, 2017

By: /s/ Fabian Tenenbaum  
Fabian Tenenbaum  
Chief Executive Officer  
(Principal Executive Officer)

Date: May 15, 2017

By: /s/ Megan Schoeps  
Megan Schoeps  
Controller  
(Principal Financial Officer)

## Exhibit Index

Exhibit Number	Description
<a href="#">31.1</a>	<a href="#">Certification of Principal Executive Officer pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as amended</a>
<a href="#">31.2</a>	<a href="#">Certification of Principal Financial Officer pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as amended</a>
<a href="#">32</a>	<a href="#">Certification of Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</a>
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

## CERTIFICATION

I, Fabian Tenenbaum, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Bellerophon Therapeutics, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 15, 2017

By: /s/ Fabian Tenenbaum  
Fabian Tenenbaum  
*Chief Executive Officer*  
*(Principal Executive Officer)*

## CERTIFICATION

I, Megan Schoeps, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Bellerophon Therapeutics, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 15, 2017

By: /s/ Megan Schoeps

Megan Schoeps

Controller

(Principal Financial Officer)

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Bellerophon Therapeutics, Inc. (the "Company"), a Delaware corporation (the "Company"), does hereby certify, to such officer's knowledge, that:

(1) the Quarterly Report for the quarter ended March 31, 2017 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

Date: May 15, 2017

By: /s/ Fabian Tenenbaum

Fabian Tenenbaum

*Chief Executive Officer*

*(Principal Executive Officer)*

Date: May 15, 2017

By: /s/ Megan Schoeps

Megan Schoeps

*Controller*

*(Principal Financial Officer)*