

**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 June 30, 2018

or

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_  
Commission File Number 001-36845

**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," "smaller reporting company" and "emerging growth 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 July 31, 2018: 57,798,637

## TABLE OF CONTENTS

	<u>Page No.</u>
<b>PART I. FINANCIAL INFORMATION</b>	<b><a href="#"><u>5</u></a></b>
<b>Item 1. Financial Statements</b>	<b><a href="#"><u>5</u></a></b>
Condensed Consolidated Balance Sheets as of June 30, 2018 (Unaudited) and December 31, 2017	<a href="#"><u>5</u></a>
Condensed Consolidated Statements of Operations for the three and six months ended June 30, 2018 and 2017 (Unaudited)	<a href="#"><u>6</u></a>
Condensed Consolidated Statements of Comprehensive Loss for the three and six months ended June 30, 2018 and 2017 (Unaudited)	<a href="#"><u>7</u></a>
Condensed Consolidated Statement of Changes in Stockholders' Equity for the six months ended June 30, 2018 (Unaudited)	<a href="#"><u>8</u></a>
Condensed Consolidated Statements of Cash Flows for the six months ended June 30, 2018 and 2017 (Unaudited)	<a href="#"><u>9</u></a>
Notes to Condensed Consolidated Financial Statements (Unaudited)	<a href="#"><u>10</u></a>
<b>Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations</b>	<b><a href="#"><u>20</u></a></b>
<b>Item 3. Quantitative and Qualitative Disclosures About Market Risk</b>	<b><a href="#"><u>30</u></a></b>
<b>Item 4. Controls and Procedures</b>	<b><a href="#"><u>30</u></a></b>
<b>PART II. OTHER INFORMATION</b>	<b><a href="#"><u>31</u></a></b>
<b>Item 1. Legal Proceedings</b>	<b><a href="#"><u>31</u></a></b>
<b>Item 1A. Risk Factors</b>	<b><a href="#"><u>31</u></a></b>
<b>Item 2. Unregistered Sales of Equity Securities and Use of Proceeds</b>	<b><a href="#"><u>31</u></a></b>
<b>Item 3. Defaults Upon Senior Securities</b>	<b><a href="#"><u>31</u></a></b>
<b>Item 4. Mine Safety Disclosures</b>	<b><a href="#"><u>31</u></a></b>
<b>Item 5. Other Information</b>	<b><a href="#"><u>31</u></a></b>
<b>Item 6. Exhibits</b>	<b><a href="#"><u>31</u></a></b>
<b>Signatures</b>	<b><a href="#"><u>32</u></a></b>

## 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;
- 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;
- 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, 2017, 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** (in thousands except share and per share data)

	As of June 30, 2018 (Unaudited)	As of December 31, 2017
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 23,403	\$ 28,823
Restricted cash	404	402
Marketable securities	2,496	2,996
Prepaid expenses and other current assets	2,491	3,359
Total current assets	28,794	35,580
Restricted cash, non-current	150	150
Other non-current assets	26	54
Property and equipment, net	845	1,026
Total assets	\$ 29,815	\$ 36,810
<b>Liabilities and Stockholders' Equity (Deficiency in Assets)</b>		
Current liabilities:		
Accounts payable	\$ 4,056	\$ 3,853
Accrued research and development	4,078	1,785
Accrued expenses	905	1,441
Total current liabilities	9,039	7,079
Common stock warrant liability	28,551	32,325
Total liabilities	37,590	39,404
Commitments and contingencies		
Stockholders' equity:		
Common stock, \$0.01 par value per share; 125,000,000 shares authorized, 57,765,304 and 56,899,353 shares issued and outstanding at June 30, 2018 and December 31, 2017, respectively, 289,269 shares paid for and to be issued at December 31, 2017	578	569
Preferred stock, \$0.01 par value per share; 5,000,000 shares authorized, zero shares issued and outstanding at June 30, 2018 and December 31, 2017	—	—
Additional paid-in capital	178,335	176,151
Accumulated other comprehensive loss	(3)	(4)
Accumulated deficit	(186,685)	(179,310)
Total stockholders' equity (deficiency in assets)	(7,775)	(2,594)
<b>Total liabilities and stockholders' equity (deficiency in assets)</b>	<b>\$ 29,815</b>	<b>\$ 36,810</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 June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Operating expenses:				
Research and development	\$ 5,815	\$ 4,689	\$ 12,195	\$ 8,026
General and administrative	2,058	1,634	4,170	3,080
Total operating expenses	7,873	6,323	16,365	11,106
Loss from operations	(7,873)	(6,323)	(16,365)	(11,106)
Change in fair value of common stock warrant liability	(3,689)	2,367	3,361	(12,020)
Interest and other income, net	91	26	190	53
Pre-tax loss	(11,471)	(3,930)	(12,814)	(23,073)
Income tax benefit	—	—	5,439	—
Net loss	\$ (11,471)	\$ (3,930)	\$ (7,375)	\$ (23,073)
Weighted average shares outstanding:				
Basic	57,229,459	33,558,669	57,145,041	32,750,949
Diluted	57,229,459	40,491,044	66,289,414	32,750,949
Net loss per share:				
Basic	\$ (0.20)	\$ (0.12)	\$ (0.13)	\$ (0.70)
Diluted	\$ (0.20)	\$ (0.15)	\$ (0.16)	\$ (0.70)

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 June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Net loss	\$ (11,471)	\$ (3,930)	\$ (7,375)	\$ (23,073)
Other comprehensive income				
Unrealized gains on available-for-sale marketable securities	2	—	1	—
Total other comprehensive income	2	—	1	—
Comprehensive loss	<u>\$ (11,469)</u>	<u>\$ (3,930)</u>	<u>\$ (7,374)</u>	<u>\$ (23,073)</u>

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 data)

	Common Stock		Additional Paid in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
December 31, 2017	56,899,353	\$ 569	\$ 176,151	\$ (4)	\$ (179,310)	\$ (2,594)
Net loss	—	—	—	—	(7,375)	(7,375)
Other comprehensive income	—	—	—	1	—	1
Warrant exercises	495,760	5	573	—	—	578
Exercise of stock options	5,875	—	4	—	—	4
Stock-based compensation	364,316	4	1,607	—	—	1,611
June 30, 2018	57,765,304	\$ 578	\$ 178,335	\$ (3)	\$ (186,685)	\$ (7,775)

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)

	Six Months Ended June 30,	
	2018	2017
<b>Cash flows from operating activities:</b>		
Net loss	\$ (7,375)	\$ (23,073)
Adjustments to reconcile net loss to net cash used in operating activities:		
Change in fair value of common stock warrant liability	(3,361)	12,020
Accretion and amortization of discounts and premiums on marketable securities, net	(1)	—
Stock based compensation	1,611	1,378
Depreciation	181	192
Issuance costs attributable to common stock warrant liability	—	111
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	868	969
Other non-current assets	28	1,029
Accounts payable, accrued research and development, and accrued expenses	1,988	(796)
Net cash used in operating activities	(6,061)	(8,170)
<b>Cash flows from investing activities:</b>		
Purchase of marketable securities	—	(1,980)
Proceeds from sale of marketable securities	502	3,650
Net cash provided by investing activities	502	1,670
<b>Cash flows from financing activities:</b>		
Payment of offering expenses related to the PIPE offering	(28)	—
Proceeds from sale of Units in Direct Offering, net of commissions and offering expenses	—	2,730
Proceeds received from exercise of warrants	165	520
Proceeds received from exercise of stock options	4	—
Payment of offering expenses related to the secondary offering	—	(235)
Net cash provided by financing activities	141	3,015
Net change in cash, cash equivalents and restricted cash	(5,418)	(3,485)
Cash, cash equivalents and restricted cash at beginning of period	29,375	14,910
Cash, cash equivalents and restricted cash at end of period	\$ 23,957	\$ 11,425
<b>Non-cash financing activities:</b>		
Unpaid expenses related to Direct Offering	\$ —	\$ 28
Conversion of warrant liability to common stock upon exercise of warrants	\$ 413	\$ 702

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 income (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, 2017, included in the Company's Annual Report on Form 10-K for the year ended December 31, 2017. The results of operations for the three and six months ended June 30, 2018 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 applicable accounting guidance 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, less estimated forfeitures, 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, estimated forfeitures and expected term. For restricted stock, the fair value is the closing market price per share on the grant date. See Note 7 - *Stock-Based Compensation* for a description of these assumptions.

**(d) Common Stock Warrants and Warrant Liability**

The Company accounts for common stock warrants issued as freestanding instruments in accordance with applicable accounting guidance 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 based on the warrants' terms 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 liability. Certain assumptions used in the model include expected volatility, dividend yield and risk-free interest rate. 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 applicable accounting guidance, 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.

**(f) Marketable Securities**

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 and other income, net, 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 is included in interest and other income, net.

**(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.

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

#### ***Adopted***

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. The Company adopted ASU 2016-01 during the quarter ended March 31, 2018. The adoption of this standard did not have an impact on the Company's financial statements.

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 provides for retrospective application for all periods presented. The Company adopted ASU 2016-15 during the quarter ended March 31, 2018. The adoption of this standard did not have an impact on the Company's financial statements.

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. The Company retrospectively adopted ASU 2016-18 during the quarter ended March 31, 2018 by including restricted cash with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows.

#### ***Not Yet Adopted***

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.

### **(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 \$23.4 million and marketable securities of \$2.5 million as of June 30, 2018.

The Company's existing cash and cash equivalents and marketable securities as of June 30, 2018 will be used primarily to fund the first of two INOpulse for PAH Phase 3 trials, a portion of the second of two INOpulse for PAH Phase 3

trials, and a Phase 2b trial of INOpulse for PH associated with Interstitial Lung Disease, or PH-ILD. In addition, as of June 30, 2018, the Company had \$1.2 million prepayments of research and development expenses related to its amended drug supply agreement with Ikaria, Inc. (a subsidiary of Mallinckrodt plc), or Ikaria. The corresponding prepayments balance as of December 31, 2017 was \$2.2 million.

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 allowed 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 9, 2017, the Company entered into a Securities Purchase Agreement, or the Purchase Agreement, under the shelf registration statement, 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 became 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 issued to the placement agent of the Direct Offering warrants to purchase up to 60,000 shares. The placement agent warrants have substantially the same terms as the warrants issued to the investor, except that the placement agent warrants have an exercise price equal to \$1.875 and will be exercisable for five years from the date of the closing of the Direct Offering. The closing of the sales of these securities under the Purchase Agreement occurred on May 15, 2017. The aggregate gross and net proceeds for the Direct Offering were \$3.0 million and \$2.7 million, respectively.

As of June 30, 2018, the Company had sold 3,025,793 shares of its common stock for gross and net proceeds of \$5.2 million and \$4.8 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.

The shelf registration statement that was filed in May 2016 was replaced by a new shelf registration statement with the SEC on Form S-3 which became effective on July 6, 2018. The new shelf registration statement allows 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 \$100 million of any combination of the Company's common stock, preferred stock, debt securities, warrants and rights, either individually or in units.

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 the Company's existing cash and cash equivalents and marketable securities as of June 30, 2018 may not be sufficient to satisfy the Company's operating cash needs for at least one year after the filing of this Quarterly Report on Form 10-Q. These factors raise substantial doubt about the Company's ability to continue as a going concern. The Company continues to pursue potential sources of funding, including equity financing.

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 may not be able to accurately 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.

#### (4) Marketable Securities

The Company considers all of its investments to be available-for-sale. Marketable securities were as follows at June 30, 2018 and December 31, 2017 (in thousands):

	June 30, 2018			December 31, 2017		
	Amortized Cost	Gross Unrealized Losses	Fair Value	Amortized Cost	Gross Unrealized Losses	Fair Value
US Government bonds	2,499	(3)	2,496	3,000	(4)	2,996
<b>Total</b>	<b>2,499</b>	<b>(3)</b>	<b>2,496</b>	<b>3,000</b>	<b>(4)</b>	<b>2,996</b>

Maturities of marketable securities classified as available-for-sale were as follows at June 30, 2018 and December 31, 2017 (in thousands):

	June 30, 2018		December 31, 2017	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Due within one year	2,499	2,496	3,000	2,996
<b>Total</b>	<b>2,499</b>	<b>2,496</b>	<b>3,000</b>	<b>2,996</b>

#### (5) Common Stock Warrants and Warrant Liability

On November 29, 2016, the Company issued warrants to purchase 17,142,858 shares 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 are classified as liabilities and recorded at estimated fair value using a Black-Scholes-Merton pricing model. As of June 30, 2018, 13,774,513 of these warrants were outstanding.

On May 15, 2017, the Company issued to an investor a warrant to purchase 1,000,000 shares that became exercisable commencing six months from their issuance and will expire five years from the initial exercise date at an exercise price of \$1.50 per share. In addition, the Company issued to the placement agent warrants to purchase 60,000 shares that were immediately exercisable and will expire five years from issuance at an exercise price of \$1.875 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. As of June 30, 2018, all of these warrants were outstanding.

On September 29, 2017, the Company issued warrants to purchase 19,449,834 shares that became exercisable commencing six months from their issuance and will expire five years from the initial exercise date at an exercise price of \$1.2420 per share. As the warrants could not require cash settlement, the warrants were classified as equity. As of June 30, 2018, all of these warrants were outstanding.

The following table summarizes warrant activity for the six months ended June 30, 2018 (fair value amount in thousands):

	Equity Classified	Liability Classified	
	Warrants	Warrants	Estimated Fair Value
Warrants outstanding as of December 31, 2017	19,449,834	15,041,004	32,325
Exercises	—	(206,491)	(413)
Change in fair value of common stock warrant liability recognized in consolidated statement of operations	—	—	(3,361)
Warrants outstanding as of June 30, 2018	<u>19,449,834</u>	<u>14,834,513</u>	<u>\$ 28,551</u>

The following table summarizes warrant activity for the six months ended June 30, 2017 (fair value amount in thousands):

	Liability Classified	
	Warrants	Estimated Fair Value
Warrants outstanding as of December 31, 2016	17,142,858	\$ 5,215
Exercises	(648,586)	(702)
Additions	1,060,000	1,118
Change in fair value of common stock warrant liability recognized in consolidated statement of operations	—	12,020
Warrants outstanding as of June 30, 2017	17,554,272	\$ 17,651

See Note 6 for determination of the fair value of the 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 June 30, 2018 for assets and liabilities measured at fair value on a recurring basis (in thousands):

	Level 1	Level 2	Level 3	Total
Marketable securities	\$ —	\$ 2,496	\$ —	\$ 2,496
Common stock warrant liability	—	—	28,551	28,551

The following table summarizes fair value measurements by level at December 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	\$ —	\$ 2,996	\$ —	\$ 2,996
Common stock warrant liabilities	—	—	32,325	32,325

The Company uses a Black-Scholes-Merton option pricing model to value its liability classified 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 changes in the inputs may result in significantly higher or lower fair value measurements.

The following are the weighted average assumptions used in estimating the fair value of warrants outstanding as of June 30, 2018 and December 31, 2017:

	June 30, 2018	December 31, 2017
Valuation assumptions:		
Risk-free interest rate	2.64%	2.08%
Expected volatility	89.09%	96.24%
Expected term (in years)	3.5	4.0
Dividend yield	—%	—%

## (7) Stock-Based Compensation

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

During 2014, the Company adopted the 2014 Equity Incentive Plan, or the 2014 Plan, which provided for the grant 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 the grant, 25% vest on the third anniversary and the remaining 50% vest on the fourth anniversary of the grant date.

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. On May 4, 2017, the Company's stockholders approved an amendment to the 2015 Plan to increase the aggregate number of shares available for the grant of awards to 5,000,000 and to increase the maximum number of shares available under the annual increase to 3,000,000 shares. As of June 30, 2018, the Company had 2,922,750 shares available for grant under the 2015 plan.

As of June 30, 2018, there was approximately \$3.0 million of total unrecognized compensation expense related to unvested stock awards. This expense is expected to be recognized over a weighted-average period of 2.5 years.

No tax benefit was recognized during the three and six months ended June 30, 2018 and 2017 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*

The weighted average grant-date fair value of options issued during the six months ended June 30, 2018 and 2017 were \$1.55 and \$1.03, respectively. The following are the weighted average assumptions used in estimating the fair values of options issued during the six months ended June 30, 2018 and 2017.

	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017
Valuation assumptions:		
Risk-free rate	2.50%	1.94%
Expected volatility	89.13%	88.57%
Expected term (years)	6.0	6.2
Dividend yield	—	—



A summary of option activity under the 2015 and 2014 Plans for the six months ended June 30, 2018 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, 2017	3,269,883	\$	0.49	- 13.28	\$ 3.04	8.4
Granted	1,508,228		2.03	- 2.29	2.09	
Exercised	(5,875)		0.49	- 1.94	0.52	
Expired	(7,983)			13.28	13.28	
Forfeited	(36,025)		0.49	- 4.12	1.80	
Options outstanding as of June 30, 2018	4,728,228	\$	0.49	- 13.28	\$ 2.73	8.5
Options vested and exercisable as of June 30, 2018	1,304,146	\$	0.49	- 13.28	\$ 6.27	7.3

The intrinsic value of options outstanding, vested and exercisable as of June 30, 2018 was \$1.1 million.

#### Restricted Stock

All restricted stock awards granted under the 2015 Plan during the six months ended June 30, 2018 were in relation to 2017 incentives for employees or director compensation and vest in full less than one year from the grant date.

A summary of restricted stock activity under the 2015 Plan for the six months ended June 30, 2018 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, 2017	328,530	\$ 1.42	\$ 0.5	0.2
Granted	364,316	2.23	0.8	
Vested	(608,083)	(1.70)	(1.0)	
Restricted stock outstanding as of June 30, 2018	84,763	\$ 2.92	\$ 0.2	0.5

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

##### Options

A summary of option activity under Ikaria incentive plans assumed in 2014 for the six months ended June 30, 2018, is presented below:

	Ikaria Equity Incentive Plans					
	Options		Range of Exercise Price		Weighted Average Price	Weighted Average Remaining Contractual Life (in years)
Options outstanding as of December 31, 2017	72,209	\$ 7.77	- 17.92		\$ 9.21	4.0
Forfeited	(2,590)			11.65	11.65	—
Options outstanding as of June 30, 2018	69,619	\$ 7.77	- 17.92		\$ 9.12	3.7
Options vested and exercisable as of June 30, 2018	69,619	\$ 7.77	- 17.92		\$ 9.12	3.7

The intrinsic value of options outstanding, vested and exercisable as of June 30, 2018 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 and six months ended June 30, 2018 and 2017 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Research and development	\$ 184	\$ 182	\$ 382	\$ 473
General and administrative	712	467	1,229	905
Total expense	<u>\$ 896</u>	<u>\$ 649</u>	<u>\$ 1,611</u>	<u>\$ 1,378</u>

**(8) Income Taxes**

Excluding the impact of the sale of state net operating losses and research and development credits during the first quarter of 2018, the effective tax rate for each of the three and six months ended June 30, 2018 and 2017 was 0.0% which was lower than the federal statutory rates primarily due to the losses incurred and the full valuation allowance on deferred tax assets.

The Company's estimated tax rate for 2018 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 valuation allowance is required until the Company has sufficient positive evidence of taxable income necessary to support realization of its deferred tax assets. In addition, the Company may be subject to certain limitations in its annual utilization of NOL carry forwards to offset future taxable income (and of tax credit carry forwards to offset future tax expense) pursuant to Section 382 of the Internal Revenue Code, which could result in tax attributes expiring unused.

In February 2018, the Company has sold \$61.5 million of state NOLs and \$0.2 million of research and development credits under the State of New Jersey's Technology Business Tax Certificate Transfer Program for net proceeds of \$5.3 million which resulted in the reversal of the valuation allowance and a tax benefit of \$5.4 million for the six months ended June 30, 2018 and, subject to state approval, plans to sell additional NOLs and credits under the same program in 2018 as well.

As of June 30, 2018, 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.

## (9) Net Loss Per Share

	Three months ended June 30, 2017		Six months ended June 30, 2018	
	2018	2017	2018	2017
Net loss	\$ (11,471)	\$ (3,930)	\$ (7,375)	\$ (23,073)
Weighted-average shares:				
Basic	57,229,459	33,558,669	57,145,041	32,750,949
Effect of dilutive securities:				
Warrants	—	6,932,375	9,144,373	—
Diluted	57,229,459	40,491,044	66,289,414	32,750,949
Net loss per share:				
Basic	\$ (0.20)	\$ (0.12)	\$ (0.13)	\$ (0.70)
Diluted	\$ (0.20)	\$ (0.15)	\$ (0.16)	\$ (0.70)

For the six months ended June 30, 2018, the total number of potential shares of common stock excluded from the diluted earnings per share computation because their inclusion would have been anti-dilutive was 30.0 million which included 4.7 million options to purchase shares, 0.1 million restricted shares and 25.1 million warrants to purchase shares.

For the six months ended June 30, 2017, the Company had 3.3 million options to purchase shares, 0.7 million restricted shares and 17.6 million 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.

For the three months ended June 30, 2018, the total number of potential shares of common stock excluded from the diluted earnings per share computation because their inclusion would have been anti-dilutive was 39.1 million which included 4.7 million options to purchase shares, 0.1 million restricted shares and 34.3 million warrants to purchase shares.

For the three months ended June 30, 2017, the Company had 3.3 million options to purchase shares, 0.7 million restricted shares and 10.6 million 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.

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.

Diluted loss per share and diluted weighted average shares outstanding for the three months ended June 30, 2017 have changed compared to amounts previously presented to reflect an immaterial correction of the impact of the change in fair value of common stock warrant liability on in-the-money warrants.

## (10) 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.

## **(11) Subsequent Event**

On July 30, 2018, the Company filed a certificate of amendment, or the Certificate of Amendment, to its Restated Certificate of Incorporation with the Secretary of State of the State of Delaware to increase the number of authorized shares of our common stock to 200,000,000 shares.

## **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, 2017 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 an 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 a Phase 3 clinical trial and related development. In September 2015, the FDA completed a Special Protocol Assessment, or SPA, for our Phase 3 PAH program for INOpulse, and agreed with our proposed clinical protocol, which included two confirmatory clinical trials. The first of the two Phase 3 trials, or INOvation-1, was initiated in June 2016. 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 modified Phase 3 program, the ongoing INOvation-1 trial, and a second confirmatory randomized withdrawal study with approximately 40 patients who will be crossing over from the INOvation-1 study, may serve as the two adequate and well-controlled clinical trials usually required to support a New Drug Application, or NDA, for INOpulse in PAH patients on LTOT assuming that the associated endpoints are met. Both clinical trials include an interim analysis approximately halfway through each trial to assess for efficacy and futility. The interim analysis for the INOvation-1 trial also includes a potential sample size reassessment. In January 2018, we announced that our INOvation-1 trial enrollment exceeded 100 patients, representing more than half of the anticipated enrollment.

We completed a randomized, placebo-controlled, double-blind, dose-confirmation Phase 2 clinical trial of INOpulse for pulmonary hypertension associated with chronic obstructive pulmonary disease, or PH-COPD, in July 2014. We received results from this trial, and completed 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 entitled "Pulmonary vascular effects of pulsed inhaled nitric oxide in COPD patients with pulmonary hypertension." In September 2017, we disclosed results of our Phase 2 PH-COPD study that was designed to evaluate the acute effects of pulsed inhaled nitric oxide, or iNO, on vasodilation as well as the chronic effect on hemodynamics and exercise tolerance. The results showed

a statistically significant and clinically meaningful increase in six-minute walk distance, or 6MWD, and a statistically significant and clinically meaningful decrease in systolic pulmonary arterial pressure, or sPAP. The therapy was well tolerated with no related safety concerns. In May 2018, we announced that we reached agreement with the FDA on all key aspects of our planned Phase 2b study of INOpulse for treatment of PH-COPD.

We have begun our clinical program in interstitial lung disease, based on feedback from the medical community and the large unmet medical need. During May 2017, we announced completion of our Phase 2 trial using INOpulse therapy to treat pulmonary hypertension, or PH, associated with idiopathic pulmonary fibrosis, or PH-IPF. The data showed that INOpulse was associated with clinically meaningful improvements in hemodynamics and exercise capacity in difficult-to-treat PH-IPF patients. The PH-IPF trial was a proof of concept study (n=4) designed to evaluate the ability of pulsed inhaled nitric oxide, or iNO, to provide selective vasodilation as well as to assess the potential for improvement in hemodynamics and exercise capacity in PH-IPF patients. The study met its primary endpoint showing an average of 15.3% increase in blood vessel volume ( $p<0.001$ ) during acute inhalation of iNO as well as showing a significant association between ventilation and vasodilation, demonstrating the ability of INOpulse to provide selective vasodilation to the better ventilated areas of the lung. The trial also showed consistent benefit in hemodynamics with a clinically meaningful average reduction of 14% in systolic pulmonary arterial pressure, or sPAP, with acute exposure to iNO. An assessment of the chronic effects of iNO on exercise capacity showed an average 75 meter improvement in 6MWD and consistent improvement of approximately 80% in composite endpoints of 6MWD and oxygen saturation with four weeks of treatment. The study assessed both the iNO 75 and iNO 30 dose, supporting iNO 30 as a potentially safe and effective dose. During August 2017, we announced FDA acceptance of our investigational new drug application, or IND for our Phase 2b clinical trial, iNO-PF, using INOpulse therapy in a broad population of patients with pulmonary fibrosis, or PF, at both low and intermediate/high risk of PH. In January 2018, we announced the first patient enrollment in our iNO-PF Phase 2b trial.

In addition, other potential indications for our INOpulse platform include: 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.

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, including to potentially advance INOpulse for PH-ILD, 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. 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. After reaching agreement with the FDA and the EMA on our Phase 3 protocol, we initiated and are currently conducting the first of two Phase 3 trials.

#### *INOpulse for PH-COPD*

We completed and received results from a randomized, placebo-controlled, double-blind, dose-confirmation Phase 2a clinical trial of INOpulse for PH-COPD in July 2014. During September 2017, we shared results of our Phase 2a PH-COPD study designed to evaluate the acute effects of pulsed inhaled nitric oxide, or iNO, on vasodilation as well as the chronic effect on hemodynamics and exercise tolerance. In May 2018, we announced that we reached agreement with the FDA on all key aspects of our planned Phase 2b study of INOpulse for treatment of PH-COPD.

#### *INOpulse for PH-ILD*

We initiated our clinical program in PH associated with interstitial lung disease, or PH-ILD, in 2016. During May 2017, we announced completion of our Phase 2 study using INOpulse therapy to treat PH associated with idiopathic pulmonary fibrosis, or PH-IPF. After reaching agreement with the FDA, we initiated and are currently conducting our Phase 2b trial in PH-ILD.

#### *Drug and Delivery System Costs*

Drug and delivery system costs include cartridge procurement, cartridge filling, delivery system manufacturing and delivery system servicing. These costs relate to all indications that utilize the INOpulse delivery system. During the three months ended September 2017, we began to incur drug and delivery system costs for our Phase 2b study using INOpulse

therapy in a broad population of patients with PF. Historically, drug and deliver system costs were primarily for our studies of INOpulse for PAH.

## *BCM*

In December 2011, we initiated a clinical trial of BCM and completed enrollment in December 2014. Top-line results from the clinical trial, announced in July 2015. In July 2018 we informed BioLineRx Ltd., from whom we in-licensed the BCM technology, on our decision to discontinue further development and terminate the License and Commercialization Agreement.

## *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/DS-C device. We believe our second generation INOpulse device, as well as a custom triple-lumen cannula, have significantly improved 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 Flex, to manufacture and service the INOpulse devices that we are using in our ongoing clinical trials of INOpulse for PAH, PH-ILD and PH-COPD.

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 June 30, 2018 and 2017

The following table summarizes our results of operations for the three months ended June 30, 2018 and 2017.

(Dollar amounts in thousands)	Three Months Ended June 30,		\$ Change	% Change
	2018	2017		
Research and development expenses:				
PAH	\$ 2,120	\$ 1,557	\$ 563	36 %
BCM	10	13	(3)	(23)%
PH-ILD and PH-COPD	393	8	385	4,813 %
Drug and delivery system costs	1,648	1,679	(31)	(2)%
Clinical programs	4,171	3,257	914	28 %
Research and development infrastructure	1,328	1,179	149	13 %
INOpulse engineering	316	253	63	25 %
Total research and development expenses	5,815	4,689	1,126	24 %
General and administrative expenses	2,058	1,634	424	26 %
Total operating expenses	7,873	6,323	1,550	25 %
Loss from operations	(7,873)	(6,323)	(1,550)	25 %
Change in fair value of common stock warrant liability	(3,689)	2,367	(6,056)	(256)%
Interest and other income, net	91	26	65	250 %
Net loss	\$ (11,471)	\$ (3,930)	\$ (7,541)	192 %

**Total Operating Expenses.** Total operating expenses for the three months ended June 30, 2018 were \$7.9 million compared to \$6.3 million for the three months ended June 30, 2017, an increase of \$1.6 million, or 25%. This increase was primarily due to increased research and development expenses pertaining to our drug and delivery system costs and to our PAH and PH-ILD clinical trials.

**Research and Development Expenses.** Total research and development expenses for the three months ended June 30, 2018 were \$5.8 million compared to \$4.7 million for the three months ended June 30, 2017, an increase of \$1.1 million, or 24%. Total research and development expenses consisted of the following:

- PAH research and development expenses were \$2.1 million for the three months ended June 30, 2018, compared to \$1.6 million for the three months ended June 30, 2017, an increase of \$0.6 million, or 36%. The increase was primarily driven by increased spending on our PAH Phase 3 trial.
- PH-ILD and PH-COPD expenses for the three months ended June 30, 2018 were \$0.4 million. The expenses for the three months ended June 30, 2017 were de minimis. The increase was primarily due to increased spending on the PH-ILD Phase 2b trial.
- Drug and delivery system costs were \$1.6 million for the three months ended June 30, 2018, compared to \$1.7 million for the three months ended June 30, 2017. Drug and delivery system costs are recorded at the time of procurement from our suppliers and the decrease in expenses was de minimis.

**General and Administrative Expenses.** General and administrative expenses were \$2.1 million for the three months ended June 30, 2018, compared to \$1.6 million for the three months ended June 30, 2017, an increase of \$0.4 million, or 26%. The increase was primarily due to commercial, intellectual property and financial consulting expenses and stock based compensation expenses.

**Change in fair value of common stock warrant liability.** Change in fair value of common stock warrant liability for the three months ended June 30, 2018 was an expense of \$(3.7) million, compared to an income of \$2.4 million for the three months ended June 30, 2017. The warrants were issued in November 2016 and May 2017 and the change in the liability fair value was primarily due to a change in our stock price and the timing of the warrants' issuance.

#### **Comparison of Six Months Ended June 30, 2018 and 2017**

The following table summarizes our results of operations for the six months ended June 30, 2018 and 2017.

(Dollar amounts in thousands)	Six Months Ended June 30, 2018		\$ Change	% Change
	2018	2017		
Research and development expenses:				
PAH	\$ 4,377	\$ 2,725	\$ 1,652	61 %
BCM	16	39	(23)	(59)%
PH-ILD and PH-COPD	894	37	857	2,316 %
Drug and delivery system costs	3,448	2,152	1,296	60 %
Clinical programs	8,735	4,953	3,782	76 %
Research and development infrastructure	2,821	2,534	287	11 %
INOpulse engineering	639	539	100	19 %
Total research and development expenses	12,195	8,026	4,169	52 %
General and administrative expenses	4,170	3,080	1,090	35 %
Total operating expenses	16,365	11,106	5,259	47 %
Loss from operations	(16,365)	(11,106)	(5,259)	47 %
Change in fair value of common stock warrant liability	3,361	(12,020)	15,381	(128)%
Interest and other income, net	190	53	137	258 %
Pre-tax loss	(12,814)	(23,073)	10,259	(44)%
Income tax benefit	\$ 5,439	\$ —	5,439	n.a.
Net loss	\$ (7,375)	\$ (23,073)	\$ 15,698	(68)%

**Total Operating Expenses.** Total operating expenses for the six months ended June 30, 2018 were \$16.4 million compared to \$11.1 million for the six months ended June 30, 2017, an increase of \$5.3 million, or 47%. This increase was primarily due to increased research and development expenses pertaining to our drug and delivery system expenses and to our PAH and PH-ILD clinical trials.

**Research and Development Expenses.** Total research and development expenses for the six months ended June 30, 2018 were \$12.2 million compared to \$8.0 million for the six months ended June 30, 2017, an increase of \$4.2 million, or 52%. Total research and development expenses consisted of the following:

- PAH research and development expenses were \$4.4 million for the six months ended June 30, 2018, compared to \$2.7 million for the six months ended June 30, 2017, an increase of \$1.7 million, or 61%. The increase was primarily driven by increased activity in the PAH Phase 3 trial.
- PH-ILD and PH-COPD expenses for the six months ended June 30, 2018 were \$0.9 million. The expenses for the six months ended June 30, 2017 were de minimis. The increase was primarily due to start up fees associated with these programs and due to increased spending on the PH-ILD Phase 2b trial.
- Drug and delivery system costs were \$3.4 million for the six months ended June 30, 2018, compared to \$2.2 million for the six months ended June 30, 2017, an increase of \$1.3 million, or 60%. The increase was driven by the utilization of additional cartridges for the PAH Phase 3 and our PH-ILD Phase 2b trials.

**General and Administrative Expenses.** General and administrative expenses were \$4.2 million for the six months ended June 30, 2018, compared to \$3.1 million for the six months ended June 30, 2017, an increase of \$1.1 million, or 35%. The increase was primarily due to commercial, intellectual property and financial consulting expenses and stock based compensation expenses.

**Income Tax Benefit.** Income tax benefit for the six months ended June 30, 2018 was \$5.4 million compared to zero for the six months ended June 30, 2017. The benefit in the first half of 2018 was from the sale of \$61.5 million of state NOLs and \$0.2 million of research and development credits under the State of New Jersey's Technology Business Tax Certificate Transfer Program for net proceeds of \$5.3 million.

**Change in fair value of common stock warrant liability.** Change in fair value of common stock warrant liability for the six months ended June 30, 2018 was income of \$3.4 million, compared to an expense of \$(12.0) million for the six months ended June 30, 2017. The warrants were issued in November 2016 and May 2017 and the change in the liability fair value was primarily due to a change in our stock price and the timing of the warrants' issuance.

## **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 \$23.4 million and marketable securities of \$2.5 million as of June 30, 2018. Our existing cash and cash equivalents and marketable securities as of June 30, 2018 will be used primarily to fund the first of two INOpulse for PAH Phase 3 trials, a portion of the second of two INOpulse for PAH Phase 3 trials, and a Phase 2b trial of INOpulse for PH-ILD. As of June 30, 2018, we had \$1.2 million prepayments of research and development expenses related to our amended drug supply agreement with Ikaria for the first of the two Phase 3 clinical trials for INOpulse for PAH. The corresponding prepayments balance as of December 31, 2017 was \$2.2 million.

On May 5, 2016, we filed a shelf registration statement with the SEC on Form S-3, which as amended became effective on May 23, 2016. The shelf registration allowed us 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 9, 2017, we entered into a Securities Purchase Agreement, or the Purchase Agreement, under the shelf registration statement, 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 became 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, we issued to the placement agent of the Direct Offering warrants to purchase up to 60,000 shares. The placement agent warrants have substantially the same terms as the warrants issued to the investor, except that the placement agent warrants 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 occurred on May 15, 2017. The aggregate gross and net proceeds for the Direct Offering were \$3.0 million and \$2.7 million, respectively.

As of June 30, 2018, we had sold 3,025,793 shares of our common stock for gross and net proceeds of \$5.2 million and \$4.8 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.

The shelf registration from May 5, 2016 was replaced by a new shelf registration statement on Form S-3 which became effective on July 6, 2018. The new shelf registration allows us to issue, from time to time at prices and on terms to be determined prior to the time of any such offering, up to \$100 million of any combination of common stock, preferred stock, debt securities, warrants and rights, either individually or in units.

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 June 30, 2018 may not be sufficient to satisfy our operating cash needs for at least one year after the filing of this Quarterly Report on Form 10-Q. These factors raise substantial doubt about our ability to continue as a going concern. Our ability to continue as a going concern is related to the further implementation of our current business plan. Advances and changes in our business plans and clinical programs may offer alternative utilization of our capital resources including shifting resources between programs as well as various strategic financing opportunities. We continue to pursue potential sources of funding, including equity financing.

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 may not be able to accurately 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, sales of state NOL and R&D credits, 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.

## Cash Flows

The following table summarizes our cash flows for the six months ended June 30, 2018 and 2017:

(Dollar amounts in thousands)	Six Months Ended June 30,	
	2018	2017
Operating activities	\$ (6,059)	\$ (8,170)
Investing activities	502	1,670
Financing activities	139	3,015
Net change in cash, cash equivalents and restricted cash	\$ (5,418)	\$ (3,485)

### Net Cash Used in Operating Activities

Cash used in operating activities for the six months ended June 30, 2018 was \$6.1 million, compared to \$8.2 million for the six months ended June 30, 2017, a decrease of \$2.1 million, or 26%. The decrease in cash used in operating activities was primarily due to the net proceeds received from selling the New Jersey state NOLs and R&D tax credits of \$5.3 million partially offset by increased cost for our PAH Phase 3 and PH-ILD Phase 2-b clinical trials.

### Net Cash Provided by Investing Activities

Cash provided by investing activities for the six months ended June 30, 2018 was \$0.5 million compared to \$1.7 million for the six months ended June 30, 2017 due to reduced proceeds from the sale of marketable securities partially offset by purchases of marketable securities for the six months ended June 30, 2017.

### Net Cash Provided by Financing Activities

Cash provided by financing activities for the six months ended June 30, 2018 was \$0.1 million compared to \$3.0 million for the six months ended June 30, 2017 which included the proceeds from the May 2017 Direct Offering and warrant exercises partially offset by the payment of issuance costs related to the 2016 secondary offering.

## Contractual Obligations and Commitments

There were no material changes in our outstanding contractual obligations from those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2017.

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, stock-based compensation and fair value of liability classified warrants. 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 six months ended June 30, 2018, 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, 2017.

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

We are exposed to market risk related to changes in interest rates. As of June 30, 2018, we had cash and cash equivalents of \$23.4 million, consisting primarily of demand deposits with U.S. banking institutions and marketable securities of \$2.5 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 June 30, 2018. 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 June 30, 2018, 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 June 30, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

**Item 5. Other Information.**

**Amendments to the Articles of Incorporation or Bylaws.**

On July 30, 2018, we filed a certificate of amendment, or the Certificate of Amendment, to our Restated Certificate of Incorporation with the Secretary of State of the State of Delaware to increase the number of authorized shares of our common stock to 200,000,000 shares. The Certificate of Amendment became effective upon filing. The Certificate of Amendment was approved by our stockholders at our annual meeting of stockholders on May 24, 2018. A copy of our Restated Certificate of Incorporation, as amended by the Certificate of Amendment, is attached hereto as Exhibit 3.1 and is incorporated by reference herein.

**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, 2017. 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, 2017.

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

None.

**Item 3. Defaults Upon Senior Securities.**

None.

**Item 4. Mine Safety Disclosures.**

Not applicable.

**Item 5. Other Information.**

None.

**Item 6. Exhibits.**

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: August 1, 2018

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

Date: August 1, 2018

By: /s/ Assaf Korner  
Assaf Korner  
Chief Financial Officer  
(Principal Financial Officer)



## Exhibit Index

Exhibit Number	Description
<a href="#"><u>3.1</u></a>	<a href="#"><u>Restated Certificate of Incorporation of Bellerophon Therapeutics, Inc., as amended, dated July 30, 2018.</u></a>
<a href="#"><u>31.1</u></a>	<a href="#"><u>Certification of Principal Executive Officer pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as amended</u></a>
<a href="#"><u>31.2</u></a>	<a href="#"><u>Certification of Principal Financial Officer pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as amended</u></a>
<a href="#"><u>32</u></a>	<a href="#"><u>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</u></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

RESTATED CERTIFICATE OF INCORPORATION  
OF

BELLEROPHON THERAPEUTICS, INC.

(Pursuant to Sections 242 and 245 of the  
General Corporation Law of the State of Delaware)

Bellerophon Therapeutics, Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "General Corporation Law"),

**DOES HEREBY CERTIFY:**

1. That the name of this corporation is Bellerophon Therapeutics, Inc. (the "Corporation"), and that the Corporation was originally incorporated pursuant to the General Corporation Law on February 12, 2015 under the name Bellerophon Therapeutics, Inc.

2. A resolution was duly adopted by the Board of Directors of the Corporation pursuant to Sections 242 and 245 of the General Corporation Law proposing this Restated Certificate of Incorporation and declaring the advisability of this Restated Certificate of Incorporation. The stockholders of the Corporation duly approved and adopted this Restated Certificate of Incorporation by written consent in accordance with Sections 228, 242 and 245 of the General Corporation Law.

Accordingly, the Certificate of Incorporation of the Corporation is hereby amended and restated in its entirety to read as follows:

FIRST: The name of the Corporation is Bellerophon Therapeutics, Inc.

SECOND: The address of the Corporation's registered office in the State of Delaware is Corporation Service Company, 2711 Centerville Road, Suite 400, in the City of Wilmington, County of New Castle, 19808. The name of its registered agent at that address is Corporation Service Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is 130,000,000 shares, consisting of (i) 125,000,000 shares of Common Stock, \$0.01 par value per share ("Common Stock"), and (ii) 5,000,000 shares of Preferred Stock, \$0.01 par value per share ("Preferred Stock").

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A COMMON STOCK.

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights of the holders of the Preferred Stock of any series as may be designated by the Board of Directors of the Corporation (the "Board of Directors") upon any issuance of the Preferred Stock of any series.

2. Voting. The holders of the Common Stock shall have voting rights at all meetings of stockholders, each such holder being entitled to one vote for each share thereof held by such holder; provided, however, that, except as otherwise required by law, holders of Common Stock shall not be entitled to vote on any amendment to this Certificate of Incorporation (which, as used herein, shall mean the certificate of incorporation of the Corporation, as amended from time to time, including the terms of any certificate of designations of any series of Preferred Stock) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together as a class with the holders of one or more other such series, to vote thereon pursuant to this Certificate of Incorporation. There shall be no cumulative voting.

The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the voting power of the outstanding capital stock of the Corporation entitled to vote thereon, voting as a single class, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law of the State of Delaware.

3. Dividends. Dividends may be declared and paid on the Common Stock from funds lawfully available therefor as and when determined by the Board of Directors and subject to any preferential dividend or other rights of any then outstanding Preferred Stock.

4. Liquidation. Upon the dissolution or liquidation of the Corporation, whether voluntary or involuntary, holders of Common Stock will be entitled to receive all assets of the Corporation available for distribution to its stockholders, subject to any preferential or other rights of any then outstanding Preferred Stock.

B PREFERRED STOCK.

Preferred Stock may be issued from time to time in one or more series, each of such series to have such terms as stated or expressed herein and in the resolution or resolutions providing for the issue of such series adopted by the Board of Directors as hereinafter provided. Any shares of Preferred Stock which may be redeemed, purchased or acquired by the Corporation may be reissued except as otherwise provided by law.

Authority is hereby expressly granted to the Board of Directors from time to time to issue the Preferred Stock in one or more series, and in connection with the creation of any such series, by adopting a resolution or resolutions providing for the issuance of the shares thereof and by filing a certificate of designations relating thereto in accordance with the General Corporation Law of the State of Delaware, to determine and fix the number of shares of such series and such voting powers, full or limited, or no voting powers, and such designations, preferences and

2

---

relative participating, optional or other special rights, and qualifications, limitations or restrictions thereof, including, without limitation thereof, dividend rights, conversion rights, redemption privileges and liquidation preferences, as shall be stated and expressed in such resolution or resolutions, all to the fullest extent now or hereafter permitted by the General Corporation Law of the State of Delaware. Without limiting the generality of the foregoing, the resolution or resolutions providing for issuance of any series of Preferred Stock may provide that such series shall be superior or rank equally or be junior to any other series of Preferred Stock to the extent permitted by law.

The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares then outstanding) by the affirmative vote of the holders of a majority of the voting power of the outstanding capital stock of the Corporation entitled to vote thereon, voting as a single class, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law of the State of Delaware.

FIFTH: Except as otherwise provided herein, the Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute and this Certificate of Incorporation, and all rights conferred upon stockholders herein are granted subject to this reservation.

SIXTH: In furtherance and not in limitation of the powers conferred upon it by the General Corporation Law of the State of Delaware, and subject to the terms of any series of Preferred Stock, the Board of Directors shall have the power to adopt, amend, alter or repeal the By-laws of the Corporation by the affirmative vote of a majority of the directors present at any regular or special meeting of the Board of Directors at which a quorum is present. The stockholders may not adopt, amend, alter or repeal the By-laws of the Corporation, or adopt any provision inconsistent therewith, unless such action is approved, in addition to any other vote required by this Certificate of Incorporation, by the affirmative vote of the holders of at least seventy-five percent (75%) of the votes that all the stockholders would be entitled to cast in any annual election of directors or class of directors. Notwithstanding any other provisions of law, this Certificate of Incorporation or the By-laws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, the affirmative vote of the holders of at least seventy-five percent (75%) of the votes which all the stockholders would be entitled to cast in any annual election of directors or class of directors shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article SIXTH.

SEVENTH: No director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for any breach of fiduciary duty as a director, provided that the foregoing shall not eliminate or limit the liability of a director (i) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the General Corporation Law of the State of Delaware, or (iv) for any transaction from which the director derived an improper personal benefit. If the General Corporation Law of the State of Delaware is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law of the State of Delaware, as so amended. No amendment to or repeal of this Article SEVENTH shall apply

3

---

to or have any effect on the liability or alleged liability of any director of the Corporation for or with respect to any acts or omissions of such director occurring prior to such amendment or repeal.

EIGHTH: The Corporation shall provide indemnification as follows:

1. Actions, Suits and Proceedings Other than by or in the Right of the Corporation. The Corporation shall, to the fullest extent permitted by Section 145 of the General Corporation Law of the State of Delaware, as amended from time to time, indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation), by reason of the fact that he or she is or was, or has agreed to become, a director or officer of the Corporation, or is or was serving, or has agreed to serve, at the request of the Corporation, as a director, officer, partner, member, employee or trustee of, or in a similar capacity with, another corporation, partnership, limited liability company, joint venture, trust or other enterprise (including any employee benefit plan) (all such persons being referred to hereafter as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), liabilities, losses, damages, judgments, fines, penalties, excise taxes (including excise taxes and penalties arising under the Employee Retirement Income Security Act of 1974, as amended from time to time), and amounts paid in settlement actually and reasonably incurred by or on behalf of Indemnitee in connection with such action, suit or proceeding and any appeal therefrom, if Indemnitee acted in good faith and in a manner which Indemnitee reasonably believed to be in, or not opposed to, the best interests of the Corporation, and, with respect to any criminal action, suit or proceeding,

had no reasonable cause to believe his or her conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that Indemnitee did not act in good faith and in a manner which Indemnitee reasonably believed to be in, or not opposed to, the best interests of the Corporation, and, with respect to any criminal action, suit or proceeding, had reasonable cause to believe that his or her conduct was unlawful.

2. Actions, Suits and Proceedings by or in the Right of the Corporation. The Corporation shall indemnify any Indemnitee who was or is a party to or threatened to be made a party to any threatened, pending or completed action, suit or proceeding by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that Indemnitee is or was, or has agreed to become, a director or officer of the Corporation, or is or was serving, or has agreed to serve, at the request of the Corporation, as a director, officer, partner, member, employee or trustee of, or in a similar capacity with, another corporation, partnership, limited liability company, joint venture, trust or other enterprise (including any employee benefit plan), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) actually and reasonably incurred by or on behalf of Indemnitee in connection with such action, suit or proceeding and any appeal therefrom, if Indemnitee acted in good faith and in a manner which Indemnitee reasonably believed to be in, or not opposed to, the best interests of the Corporation, except that no indemnification shall be made under this Section 2 in respect of any claim, issue or matter as to which Indemnitee shall have been adjudged to be liable to the Corporation, unless, and only to the extent that, the Court of Chancery of Delaware or the court in which such action, suit or proceeding was brought shall determine upon

---

4

application that, despite the adjudication of such liability but in view of all the circumstances of the case, Indemnitee is fairly and reasonably entitled to indemnity for such expenses (including attorneys' fees) which the Court of Chancery of Delaware or such other court shall deem proper.

3. Indemnification for Expenses of Successful Party. Notwithstanding any other provisions of this Article EIGHTH, to the extent that an Indemnitee has been successful, on the merits or otherwise, in defense of any action, suit or proceeding referred to in Sections 1 and 2 of this Article EIGHTH, or in defense of any claim, issue or matter therein, or on appeal from any such action, suit or proceeding, Indemnitee shall be indemnified against all expenses (including attorneys' fees) actually and reasonably incurred by or on behalf of Indemnitee in connection therewith. Without limiting the foregoing, if any action, suit or proceeding is disposed of, on the merits or otherwise (including a disposition without prejudice), without (i) the disposition being adverse to Indemnitee, (ii) an adjudication that Indemnitee was liable to the Corporation, (iii) a plea of guilty or nolo contendere by Indemnitee, (iv) an adjudication that Indemnitee did not act in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the Corporation, and (v) with respect to any criminal proceeding, an adjudication that Indemnitee had reasonable cause to believe his or her conduct was unlawful, Indemnitee shall be considered for the purposes hereof to have been wholly successful with respect thereto.

4. Notification and Defense of Claim. Indemnitee shall notify the Corporation in writing as soon as practicable of any action, suit, proceeding or investigation involving such Indemnitee for which indemnity will or could be sought, but failure to do so shall not adversely affect Indemnitee's rights to indemnification unless, and then only to the extent that, the Corporation was materially and adversely affected thereby. With respect to any action, suit, proceeding or investigation of which the Corporation is so notified, the Corporation will be entitled to participate therein at its own expense and/or to assume the defense thereof at its own expense, with legal counsel reasonably acceptable to Indemnitee. After notice from the Corporation to Indemnitee of its election so to assume such defense, the Corporation shall not be liable to Indemnitee for any legal or other expenses subsequently incurred by Indemnitee in connection with such action, suit, proceeding or investigation, other than as provided below in this Section 4. Indemnitee shall have the right to employ his or her own counsel in connection with such action, suit, proceeding or investigation, but the fees and expenses of such counsel incurred after notice from the Corporation of its assumption of the defense thereof shall be at the expense of Indemnitee unless (i) the employment of counsel by Indemnitee has been authorized by the Corporation, (ii) counsel to Indemnitee shall have reasonably concluded that there may be a conflict of interest or position on any significant issue between the Corporation and Indemnitee in the conduct of the defense of such action, suit, proceeding or investigation or (iii) the Corporation shall not in fact have employed counsel to assume the defense of such action, suit, proceeding or investigation, in each of which cases the fees and expenses of counsel for Indemnitee shall be at the expense of the Corporation, except as otherwise expressly provided by this Article EIGHTH. The Corporation shall not be entitled, without the consent of Indemnitee, to assume the defense of any claim brought by or in the right of the Corporation or as to which counsel for Indemnitee shall have reasonably made the conclusion provided for in clause (ii) above. The Corporation shall not be required to indemnify Indemnitee under this Article EIGHTH for any amounts paid in settlement of any action, suit, proceeding or investigation effected without its written consent. The Corporation shall not settle any action, suit, proceeding or investigation in any manner which would impose any penalty or limitation on Indemnitee, or

---

5

any payment obligation on Indemnitee (unless the Corporation has irrevocably agreed in writing that it is responsible for such payment obligation and will make such payment without seeking any reimbursement or contribution from Indemnitee) without Indemnitee's written consent. Neither the Corporation nor Indemnitee will unreasonably withhold or delay its consent to any proposed settlement.

5. Advance of Expenses. In the event of any threatened or pending action, suit, proceeding or investigation of which the Corporation receives notice under this Article EIGHTH, any expenses (including attorneys' fees) incurred by or on behalf of Indemnitee in defending an action, suit, proceeding or investigation or any appeal therefrom shall be paid by the Corporation in advance of the final disposition of such matter; provided, however, that the payment of such expenses incurred by or on behalf of Indemnitee in advance of the final disposition of such matter shall be made only upon receipt of an undertaking by or on behalf of Indemnitee to repay all amounts so advanced in the event that it shall ultimately be determined by final judicial decision of a court of competent jurisdiction from which there is no further right to appeal that Indemnitee is not entitled to be indemnified by the Corporation as authorized in this Article EIGHTH. Such undertaking shall be accepted without reference to the financial ability of Indemnitee to make such repayment. Any such advancement of expenses shall be made promptly, and in any

event within 20 days, after receipt by the Corporation of the written request of Indemnitee therefor.

6. Procedure for Indemnification. In order to obtain indemnification pursuant to Section 1, 2 or 3 of this Article EIGHTH, an Indemnitee shall submit to the Corporation a written request. Any such indemnification, unless ordered by a court, shall be made with respect to requests under Section 1 or 2 of this Article EIGHTH only as authorized in the specific case upon a determination by the Corporation that the indemnification of Indemnitee is proper because Indemnitee has met the applicable standard of conduct set forth in Section 1 or 2 of this Article EIGHTH, as the case may be. Such determination shall be made in each instance (a) by a majority vote of the directors of the Corporation consisting of persons who are not at that time parties to the action, suit or proceeding in question ("disinterested directors"), whether or not a quorum, (b) by a committee of disinterested directors designated by majority vote of disinterested directors, whether or not a quorum, (c) if there are no disinterested directors, or if the disinterested directors so direct, by independent legal counsel (who shall not be regular legal counsel to the Corporation) in a written opinion, or (d) by the stockholders of the Corporation. In making any determination hereunder, Indemnitee shall be presumed to have met the applicable standard of conduct so as to be entitled to indemnification, and the Corporation shall have the burden of proving otherwise. Any indemnification under this Article EIGHTH shall be made promptly, and in any event within 60 days, upon the written request of Indemnitee.

7. Remedies. The right to indemnification or advancement of expenses as granted by this Article EIGHTH shall be enforceable by Indemnitee in any court of competent jurisdiction. Neither the failure of the Corporation to have made a determination prior to the commencement of such action, suit or proceeding that indemnification of Indemnitee is proper in the circumstances because Indemnitee has met the applicable standard of conduct, nor an actual determination by the Corporation pursuant to Section 6 of this Article EIGHTH that Indemnitee has not met such applicable standard of conduct, shall be a defense to the action, suit or proceeding or create a presumption that Indemnitee has not met the applicable standard of

6

---

conduct. In any action, suit or proceeding brought by Indemnitee to enforce a right to indemnification, or brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Corporation shall have the burden of proving that Indemnitee is not entitled to be indemnified under this Article EIGHTH. Indemnitee's expenses (including attorneys' fees) reasonably incurred in connection with successfully establishing Indemnitee's right to indemnification, in whole or in part, in any such proceeding shall also be indemnified by the Corporation. Subject to the foregoing, in any action, suit or proceeding brought by Indemnitee to enforce a right to indemnification hereunder it shall be a defense that Indemnitee has not met any applicable standard for indemnification set forth in the General Corporation Law of the State of Delaware.

8. Limitations. Notwithstanding anything to the contrary in this Article EIGHTH, except as set forth in Section 7 of this Article EIGHTH, the Corporation shall not indemnify an Indemnitee pursuant to this Article EIGHTH in connection with a proceeding (or part thereof) initiated by such Indemnitee unless the initiation thereof was approved by the Board of Directors or a committee thereof designated by the Board of Directors. This Section 8 shall not apply to counterclaims or affirmative defenses asserted by Indemnitee in any action, suit or proceeding brought against Indemnitee, nor shall it apply to any action, suit or proceeding brought by Indemnitee to enforce Indemnitee's rights under any liability insurance policy paid for by the Company and insuring Indemnitee.

9. Subsequent Amendment. No amendment, termination or repeal of this Article EIGHTH or of the relevant provisions of the General Corporation Law of the State of Delaware or any other applicable laws shall adversely affect or diminish in any way the rights of any Indemnitee to indemnification under the provisions hereof with respect to any action, suit, proceeding or investigation arising out of or relating to any actions, transactions or facts occurring prior to the final adoption of such amendment, termination or repeal.

10. Other Rights. The indemnification and advancement of expenses provided by this Article EIGHTH shall not be deemed exclusive of any other rights to which an Indemnitee seeking indemnification or advancement of expenses may be entitled under any law (common or statutory), agreement or vote of stockholders or disinterested directors or otherwise, both as to action in Indemnitee's official capacity and as to action in any other capacity while holding office for the Corporation, and shall continue as to an Indemnitee who has ceased to be a director or officer, or has ceased to serve in such other capacity, and shall inure to the benefit of the estate, heirs, executors and administrators of Indemnitee. All rights to indemnification under this Article EIGHTH shall be deemed to be a contract between the Corporation and Indemnitee. Nothing contained in this Article EIGHTH shall be deemed to prohibit, and the Corporation is specifically authorized to enter into, agreements with officers and directors providing indemnification rights and procedures different from (including rights and procedures which provide broader indemnification or are otherwise more favorable to Indemnitee than) those set forth in this Article EIGHTH. In addition, the Corporation may, to the extent authorized from time to time by its Board of Directors, grant indemnification rights to other employees or agents of the Corporation or other persons serving the Corporation and such rights may be equivalent to, or greater or less than, those set forth in this Article EIGHTH.

7

---

11. Partial Indemnification. If an Indemnitee is entitled under any provision of this Article EIGHTH to indemnification by the Corporation for some or a portion of the expenses (including attorneys' fees), liabilities, losses, judgments, fines (including excise taxes and penalties arising under the Employee Retirement Income Security Act of 1974) or amounts paid in settlement actually and reasonably incurred by or on behalf of Indemnitee in connection with any action, suit, proceeding or investigation and any appeal therefrom but not, however, for the total amount thereof, the Corporation shall nevertheless indemnify Indemnitee for the portion of such expenses (including attorneys' fees), liabilities, losses, damages, judgments, fines, penalties, excise taxes (including excise taxes and penalties arising under the Employee Retirement Income Security Act of 1974, as amended from time to time) or amounts paid in settlement to which Indemnitee is entitled.

12. Insurance. The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, officer,

employee or agent of the Corporation or another corporation, partnership, limited liability company, joint venture, trust or other enterprise (including any employee benefit plan) against any expense, liability or loss incurred by him or her in any such capacity, or arising out of his or her status as such, whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the General Corporation Law of the State of Delaware.

13. Savings Clause. If this Article EIGHTH or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the Corporation shall nevertheless indemnify each Indemnitee as to any expenses (including attorneys' fees), liabilities, losses, judgments, fines (including excise taxes and penalties arising under the Employee Retirement Income Security Act of 1974) and amounts paid in settlement in connection with any action, suit, proceeding or investigation, whether civil, criminal or administrative, including an action by or in the right of the Corporation, to the fullest extent permitted by any applicable portion of this Article EIGHTH that shall not have been invalidated and to the fullest extent permitted by applicable law.

14. Definitions. Terms used herein and defined in Section 145(h) and Section 145(i) of the General Corporation Law of the State of Delaware shall have the respective meanings assigned to such terms in such Section 145(h) and Section 145(i).

NINTH: This Article NINTH is inserted for the management of the business and for the conduct of the affairs of the Corporation.

1. General Powers. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

2. Number of Directors; Election of Directors. Subject to the rights of holders of any series of Preferred Stock to elect directors, the number of directors of the Corporation shall be established by the Board of Directors. Election of directors need not be by written ballot, except as and to the extent provided in the By-laws of the Corporation.

3. Classes of Directors. Subject to the rights of holders of any series of Preferred Stock to elect directors, the Board of Directors shall be and is divided into three classes,

8

---

designated Class I, Class II and Class III. Each class shall consist, as nearly as may be possible, of one-third of the total number of directors constituting the entire Board of Directors. The Board of Directors is authorized to assign members of the Board of Directors already in office to Class I, Class II or Class III at the time such classification becomes effective.

4. Terms of Office. Subject to the rights of holders of any series of Preferred Stock to elect directors, each director shall serve for a term ending on the date of the third annual meeting of stockholders following the annual meeting of stockholders at which such director was elected; provided that each director initially assigned to Class I shall serve for a term expiring at the Corporation's first annual meeting of stockholders held after the effectiveness of this Restated Certificate of Incorporation; each director initially assigned to Class II shall serve for a term expiring at the Corporation's second annual meeting of stockholders held after the effectiveness of this Restated Certificate of Incorporation; and each director initially assigned to Class III shall serve for a term expiring at the Corporation's third annual meeting of stockholders held after the effectiveness of this Restated Certificate of Incorporation; provided further, that the term of each director shall continue until the election and qualification of his or her successor and be subject to his or her earlier death, resignation or removal.

5. Quorum. The greater of (i) a majority of the directors at any time in office and (ii) one-third of the number of directors fixed pursuant to Section 2 of this Article NINTH shall constitute a quorum of the Board of Directors. If at any meeting of the Board of Directors there shall be less than such a quorum, a majority of the directors present may adjourn the meeting from time to time without further notice other than announcement at the meeting, until a quorum shall be present.

6. Action at Meeting. Every act or decision done or made by a majority of the directors present at a meeting duly held at which a quorum is present shall be regarded as the act of the Board of Directors unless a greater number is required by law or by this Certificate of Incorporation.

7. Removal. Subject to the rights of holders of any series of Preferred Stock and/or any agreement binding upon the Corporation, directors of the Corporation may be removed only for cause and only by the affirmative vote of the holders of at least seventy-five percent (75%) of the votes which all the stockholders would be entitled to cast in any annual election of directors or class of directors.

8. Vacancies. Subject to the rights of holders of any series of Preferred Stock and/or any agreement binding upon the Corporation, any vacancy or newly created directorship in the Board of Directors, however occurring, shall be filled only by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director and shall not be filled by the stockholders. A director elected to fill a vacancy shall hold office until the next election of the class for which such director shall have been chosen, subject to the election and qualification of a successor and to such director's earlier death, resignation or removal.

9. Stockholder Nominations and Introduction of Business, Etc. Advance notice of stockholder nominations for election of directors and other business to be brought by

9

---

stockholders before a meeting of stockholders shall be given in the manner provided by the By-laws of the Corporation.

10. Amendments to Article. Notwithstanding any other provisions of law, this Certificate of Incorporation or the By-laws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, the affirmative vote of the holders of at least seventy-five percent (75%) of the votes which all the stockholders would be entitled to cast in any annual election of directors or class of directors shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article NINTH.

TENTH: Stockholders of the Corporation may not take any action by written consent in lieu of a meeting. Notwithstanding any other provisions of law, this Certificate of Incorporation or the By-laws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, the affirmative vote of the holders of at least seventy-five percent (75%) of the votes which all the stockholders would be entitled to cast in any annual election of directors or class of directors shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article TENTH.

ELEVENTH: Special meetings of stockholders for any purpose or purposes may be called at any time by only the Board of Directors, the Chairman of the Board, the Lead Director or the Chief Executive Officer, and may not be called by any other person or persons. Business transacted at any special meeting of stockholders shall be limited to matters relating to the purpose or purposes stated in the notice of meeting. Notwithstanding any other provisions of law, this Certificate of Incorporation or the By-laws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, the affirmative vote of the holders of at least seventy-five percent (75%) of the votes which all the stockholders would be entitled to cast in any annual election of directors or class of directors shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article ELEVENTH.

TWELFTH: Except as otherwise agreed in writing, (i) to the fullest extent permitted by Section 122(17) of the General Corporation Law of the State of Delaware, the Corporation hereby renounces any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Corporate Opportunity; and (ii) the Corporation acknowledges that, to the fullest extent permitted by law, no Specified Person shall be liable to the Corporation or its stockholders for breach of any fiduciary or other duty by reason of the fact that such Specified Person pursues or acquires a Corporate Opportunity for itself, directs a Corporate Opportunity to another Person, or does not communicate or offer information regarding a Corporate Opportunity to the Corporation; provided, that, in the case of a Specified Person that is a director, officer or employee of the Corporation, the Corporation does not renounce any interest or expectancy in any Corporate Opportunity that is expressly offered to such Specified Person in writing solely in his or her capacity as a director, officer or employee of the Corporation. In the event any Specified Person acquires knowledge of a potential transaction or matter which may constitute a Corporate Opportunity, such Specified Person shall, to the fullest extent permitted by law, have no duty to offer or communicate information regarding any Corporate Opportunity to the Corporation, and such Specified Person shall have the right to take for his, her or its own account (individually or as a partner or fiduciary) or to recommend to another Person any such Corporate Opportunity, unless in the case of a Specified Person that is a

10

---

director, officer or employee of the Corporation, such Corporate Opportunity is expressly offered to such Specified Person in writing solely in his or her capacity as a director, officer or employee of the Corporation. No Specified Person shall be obligated to finance any Corporate Opportunity for the Corporation.

For purposes of this Article TWELFTH, (i) the term “Affiliate” shall mean, with respect to any Person, any other Person that, directly or indirectly, controls, is controlled by or is under common control with such Person, where “control” means the possession, directly or indirectly, of the power to direct the management and policies of such Person, whether through the ownership of voting securities, by contract, or otherwise; (ii) the term “Corporate Opportunity” shall mean an investment, business opportunity or prospective economic or competitive advantage, including, without limitation, any matter (A) in which the Corporation could have an interest or expectancy, (B) which the Corporation is financially able to undertake, or with respect to which the Corporation would reasonably be able to obtain debt or equity financing, and (C) which is, from its nature, in the line or lines of the Corporation’s business or reasonable expansion thereof; (iii) the term “Corporation” shall mean the Corporation and all corporations, partnerships, joint ventures, associations and other entities in which the Corporation beneficially owns (directly or indirectly) 50% or more of the outstanding voting stock, voting power, partnership interests or similar voting interests; (iv) the term “Person” shall mean an individual, partnership, association, corporation, limited liability company, unincorporated organization, trust, estate or joint venture, or a nation, government, governmental agency or political subdivision thereof, or any person exercising executive, legislative, judicial, regulatory, administrative or taxing functions of or pertaining to government, including any court, or any other entity of any kind; and (v) the term “Specified Person” shall mean a stockholder of the Corporation or any of such stockholder’s Affiliates, or any officer, director, manager, member, partner, stockholder, employee, advisor or agent of such stockholder or any of its Affiliates (including any individual serving as a director of the Corporation), except those stockholders who are employees of the Corporation or any of its subsidiaries, provided, however, that for purposes of this definition of “Specified Person,” none of the Specified Persons, on one hand, or the Corporation, on the other hand, shall be deemed to be an Affiliate of one another.

Neither the alteration, amendment or repeal of this Article TWELFTH nor the adoption of any provisions of this Certificate of Incorporation inconsistent with this Article TWELFTH shall eliminate or reduce the effect of this Article TWELFTH in respect of any matter occurring, or any cause of action, suit or claim that, but for this Article TWELFTH, would accrue or arise prior to such alteration, amendment, repeal or adoption.

THIRTEENTH: Section 203 of the General Corporation Law of the State of Delaware, as it may be amended from time to time, shall (a) prior to the NMP Holder Transition Time, not apply to the Corporation and (b) from and after the NMP Holder Transition Time, apply to the Corporation in accordance with its terms.

For purposes of this Article THIRTEENTH, (i) the term “NMP Affiliate” shall mean an Affiliate of the NMP Entities, (ii) the term “NMP Holder Transition Time” shall mean the first time that neither (A) the NMP Entities and the NMP Affiliates nor (B) any Qualified Transferee



Beneficially Owns 15% or more of the Quarterly Outstanding Common Stock, (iii) the term “Qualified Transferee” shall mean any Person that has acquired at least 15% of the Quarterly

Outstanding Common Stock, as of the date of such acquisition, from the NMP Entities and/or the NMP Affiliates in a transaction other than a Public Offering or a sale pursuant to Rule 144 and (iv) the terms “Affiliate,” “Beneficially Own,” “NMP Entities,” “Person,” “Public Offering,” “Quarterly Outstanding Common Stock” and “Rule 144” shall have the respective meanings given to such terms in the Registration Rights Agreement, dated as of February 12, 2015, by and among the Corporation and the other parties thereto, as the same may be amended, restated, modified or supplemented from time to time.

FOURTEENTH: Unless the Corporation consents in writing to the selection of an alternative forum (including by entering into a written agreement or executing a written instrument which provides for a different forum to have jurisdiction or provides that an action, suit or proceeding may be brought in any court of competent jurisdiction or provides for arbitration), and except as otherwise provided in this Certificate of Incorporation, the Court of Chancery in the State of Delaware shall, to the fullest extent permitted by law, be the sole and exclusive forum for any stockholder (including a beneficial owner) to bring (i) any derivative action, suit or proceeding brought on behalf of the Corporation, (ii) any action, suit or proceeding asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation’s stockholders, (iii) any action, suit or proceeding asserting a claim against the Corporation, its directors, officers or employees arising pursuant to any provision of the Delaware General Corporation Law or this Certificate of Incorporation or the By-laws of the Corporation or (iv) any action, suit or proceeding asserting a claim against the Corporation, its directors, officers or employees governed by the internal affairs doctrine, except for, as to each of clauses (i) through (iv) above, any claim as to which the Court of Chancery determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery within ten days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, or for which the Court of Chancery does not have subject matter jurisdiction. If any provision or provisions of this Article FOURTEENTH shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article FOURTEENTH (including, without limitation, each portion of any sentence of this Article FOURTEENTH containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby. Any person purchasing or otherwise acquiring or holding any interest in shares of capital stock of the Corporation shall be deemed to have received notice of and consented to the provisions of this Article FOURTEENTH.

\*\*\*\*\*

IN WITNESS WHEREOF, this Restated Certificate of Incorporation, which restates, integrates and amends the certificate of incorporation of the Corporation, and which has been duly adopted in accordance with Sections 228, 242 and 245 of the General Corporation Law of the State of Delaware, has been executed by its duly authorized officer this 19th day of February, 2015.

BELLEROPHON THERAPEUTICS, INC.

By: /s/ Jonathan Peacock  
Name: Jonathan Peacock  
Title: President and Chief Executive Officer

---



**CERTIFICATE OF AMENDMENT**  
**TO**  
**RESTATED CERTIFICATE OF INCORPORATION OF**  
**BELLEROPHON THERAPEUTICS, INC.**

Pursuant to Section 242 of the General Corporation Law of the State of Delaware, Bellerophon Therapeutics, Inc., a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), does hereby certify as follows:

1. The name of the Corporation is Bellerophon Therapeutics, Inc. The date of filing of its original Certificate of Incorporation with the Secretary of State of the State of Delaware was February 12, 2015, under the name of Bellerophon Therapeutics, Inc. The date of filing of its Restated Certificate of Incorporation with the Secretary of State of the State of Delaware was February 19, 2015.


2. The Board of Directors of the Corporation has duly adopted a resolution pursuant to Section 242 of the General Corporation Law of the State of Delaware setting forth a proposed amendment to the Restated Certificate of Incorporation of the Corporation and declaring said amendment to be advisable. The requisite stockholders of the Corporation have duly approved said proposed amendment in accordance with Section 242 of the General Corporation Law of the State of Delaware. The amendment amends the Restated Certificate of Incorporation of the Corporation as follows:

The first sentence of Article FOURTH is hereby amended as follows:

"The total number of shares of all classes of stock which the Corporation shall have authority to issue is 205,000,000 shares, consisting of (i) 200,000,000 shares of Common Stock, \$0.01 par value per share ("Common Stock"), and (ii) 5,000,000 shares of Preferred Stock, \$0.01 par value per share ("Preferred Stock")."

3. This Certificate of Amendment shall be effective immediately upon filing.

**BELLEROPHON THERAPEUTICS, INC.**

By:   
Name: Fabian Tenenbaum  
Title: Chief Executive Officer

## 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: 8/1/2018

By: /s/ Fabian Tenenbaum

Fabian Tenenbaum

*Chief Executive Officer*

*(Principal Executive Officer)*

## CERTIFICATION

I, Assaf Korner, 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: 8/1/2018

By: /s/ Assaf Korner

Assaf Korner

Chief Financial Officer

(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 June 30, 2018 (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: 8/1/2018

By: /s/ Fabian Tenenbaum

Fabian Tenenbaum

*Chief Executive Officer*

*(Principal Executive Officer)*

Date: 8/1/2018

By: /s/ Assaf Korner

Assaf Korner

*Chief Financial Officer*

*(Principal Financial Officer)*