UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K/A

(Amendment No. 1)

(Mark One)

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

For the fiscal year ended December 31, 2017

or

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

For the transition period from to

Commission file number 001-36845

Bellerophon Therapeutics, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**47-3116175**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
184 Liberty Corner Road, Suite 302 Warren, New Jersey	**07059**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(908) 574-4770**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, $0.01 par value per share	**The Nasdaq Global Market**

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. ☐ Yes x No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. ☐ Yes x No

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. x 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). x Yes ☐ No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

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

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

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

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

As of June 30, 2017, the aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant was approximately $25.0 million, based upon the closing price on the Nasdaq Global Market reported for such date. Shares of common stock held by each officer and director and by each person who is known to own 10% or more of the outstanding common stock have been excluded in that such persons may be deemed to be

affiliates of the registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

The number of shares outstanding of the registrant's common stock, as of March 10, 2018: 57,369,165

DOCUMENTS INCORPORATED BY REFERENCE

The following documents (or parts thereof) are incorporated by reference into the following parts of this Form 10-K: Certain information required in Part III of this Annual Report on Form 10-K is incorporated from the registrant's Proxy Statement for the Annual Meeting of Stockholders to be held on May 24, 2018.

EXPLANATORY NOTE

This Amendment No. 1 on Form 10-K/A (the "Amendment") amends the Annual Report on Form 10-K of Bellerophon Therapeutics, Inc. (the "Company") for the year ended December 31, 2017, originally filed on March 15, 2018 (the "Original Filing"). The Company is filing the Amendment solely to provide an amended report of its independent registered public accounting firm that includes a statement inadvertently omitted by KPMG LLP from the previously filed version that confirms the Company's independent registered accounting firm did not audit the Company's internal control over financial reporting.

In accordance with applicable Securities and Exchange Commission ("SEC") rules and as required by Rule 12b-15 under the Securities Exchange Act of 1934, as amended, Amendment No. 1 includes new certifications from the Company's Principal Executive Officer and Principal Financial Officer dated as of the date of filing of Amendment No. 1.

This Amendment No. 1 consists solely of the preceding cover page, this explanatory note, Part II., Item 8., "Financial Statements and Supplementary Data," in its entirety, Part IV., Item 15., "Exhibits and Financial Statement Schedules," in its entirety, the signature page, and the new certifications from the Company's Principal Executive Officer and Principal Financial Officer.

Amendment No. 1 speaks as of the date of the Original 10-K, does not reflect events that may have occurred after the date of the Original 10-K and does not modify or update in any way the disclosures made in the Original 10-K, except as described above. Amendment No. 1 should be read in conjunction with the Original 10-K and with the Company's subsequent filings with the SEC.

PART II

Item 8. Financial Statements and Supplementary Data

Index to Financial Statements

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
Bellerophon Therapeutics, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Bellerophon Therapeutics, Inc. (formerly Bellerophon Therapeutics LLC) and subsidiaries (the Company) as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive loss, changes in stockholders'/members' equity (deficiency in assets), and cash flows for each of the years in the three-year period ended December 31, 2017, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 2013.

Short Hills, New Jersey
March 15, 2018

BELLEROPHON THERAPEUTICS, INC.

Consolidated Balance Sheets

(Amounts in thousands, except share and per share data)

	December 31, 2017	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents	$ 28,823	$ 14,202
Restricted cash	402	401
Marketable securities	2,996	5,571
Prepaid expenses and other current assets	3,359	6,331
Total current assets	35,580	26,505
Restricted cash, non-current	150	307
Other non-current assets	54	1,491
Property and equipment, net	1,026	1,399
Total assets	$ 36,810	$ 29,702
Liabilities and Stockholders' Equity (Deficiency in Assets)		
Current liabilities:		
Accounts payable	$ 3,853	$ 2,807
Accrued research and development	1,785	2,573
Accrued expenses	1,441	1,115
Total current liabilities	7,079	6,495
Common stock warrant liability	32,325	5,215
Total liabilities	39,404	11,710
Commitments and contingencies (Note 13)		
Stockholders' equity (Deficiency in assets):		
Common stock, $0.01 par value per share; 125,000,000 shares authorized, 56,899,353 shares issued and outstanding at December 31, 2017, 31,702,624 shares issued and outstanding at December 31, 2016, 289,269 shares paid for and to be issued at December 31, 2017	569	317
Preferred stock, $0.01 par value per share; 5,000,000 shares authorized, zero shares issued and outstanding at December 31, 2017 and 2016	—	—
Additional paid-in capital	176,151	142,167
Accumulated other comprehensive loss	(4)	—
Accumulated deficit	(179,310)	(124,492)
Total stockholders' equity (deficiency in assets)	(2,594)	17,992
Total liabilities and stockholders' equity (deficiency in assets)	$ 36,810	$ 29,702

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

BELLEROPHON THERAPEUTICS, INC.

Consolidated Statements of Operations

(Amounts in thousands, except share and per share data)

	Year Ended December 31,		
	2017	**2016**	**2015**
Operating expenses:			
Research and development	$ 17,854	$ 16,650	$ 33,365
General and administrative	6,745	7,107	14,870
Total operating expenses	24,599	23,757	48,235
Other operating income	—	—	1,667
Loss from operations	(24,599)	(23,757)	(46,568)
Change in fair value of common stock warrant liability	(30,403)	(590)	—
Interest and other income, net	184	95	109
Pre-tax loss	(54,818)	(24,252)	(46,459)
Income tax benefit	—	(438)	—
Net loss	$ (54,818)	$ (23,814)	$ (46,459)
Weighted average shares outstanding:			
Basic and diluted	38,950,937	15,057,627	12,267,693
Net loss per share:			
Basic and diluted	$ (1.41)	$ (1.58)	(3.79)

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

BELLEROPHON THERAPEUTICS, INC.

Consolidated Statements of Comprehensive Loss
(in thousands)

	Year Ended December 31,		
	2017	**2016**	**2015**
Net loss	$ (54,818)	$ (23,814)	$ (46,459)
Other comprehensive income (loss)			
Unrealized gains (losses) on available-for-sale marketable securities	$ (4)	$ 19	$ (19)
Total other comprehensive income (loss)	$ (4)	$ 19	$ (19)
Comprehensive loss	$ (54,822)	$ (23,795)	$ (46,478)

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

BELLEROPHON THERAPEUTICS, INC.

Consolidated Statements of Changes in Stockholders'/Members' Equity (Deficiency in Assets)
(Amounts in thousands except unit/share and per share data)

	Membership Units		Common Stock					
	Units	Amount	Shares	Amount	Additional Paid in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders'/Members' Equity (Deficiency in Assets)
Balance at December 31, 2014	7,905,325	$ 77,156	—	$ —	$ —	$ —	$ (54,219)	$ 22,937
Net loss	—	—	—	—	—	—	(46,459)	(46,459)
Other comprehensive loss	—	—	—	—	—	(19)	—	(19)
Sale of membership units	67	1	—	—	—	—	—	1
Conversion of membership units into common stock in connection with conversion of LLC into a C-Corp.	(7,905,392)	(77,157)	7,905,392	79	77,078	—	—	—
Sale of common stock in initial public offering ($12.00 per share), net of offering expenses of $8,085	—	—	5,000,000	50	51,865	—	—	51,915
Common stock issued to Global Corporate Finance	—	—	8,000	—	24	—	—	24
Exercise of options	—	—	126,499	1	185	—	—	186
Stock-based compensation	—	—	90,909	1	1,750	—	—	1,751
Balance at December 31, 2015	—	$ —	13,130,800	$ 131	$ 130,902	$ (19)	$ (100,678)	$ 30,336
Net loss	—	—	—	—	—	—	(23,814)	(23,814)
Other comprehensive income	—	—	—	—	—	19	—	19
Sale of common stock in ATM offering, net of offering expenses of $134	—	—	1,025,793	10	2,099	—	—	2,109
Sale of common stock in Secondary Offering, net of offering expenses of $662	—	—	17,142,858	172	6,540	—	—	6,712
Stock-based compensation	—	—	403,173	4	2,626	—	—	2,630
Balance at December 31, 2016	—	$ —	31,702,624	$ 317	$ 142,167	$ —	$ (124,492)	$ 17,992
Net loss	—	—	—	—	—	—	(54,818)	(54,818)
Other comprehensive loss	—	—	—	—	—	(4)	—	(4)
Sale of common stock and warrants in PIPE Offering, net of offering expenses of $677	—	—	19,449,834	194	22,565	—	—	22,759
Sale of common stock in Direct Offering, net of offering expenses of $187	—	—	2,000,000	20	1,675	—	—	1,695
Warrant exercises - shares do not include 289,269 shares paid for but not issued at December 31, 2017	—	—	2,872,585	29	6,912	—	—	6,941
Stock-based compensation	—	—	874,310	9	2,832	—	—	2,841
Balance at December 31, 2017	—	$ —	56,899,353	$ 569	$ 176,151	$ (4)	$ (179,310)	$ (2,594)

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

BELLEROPHON THERAPEUTICS, INC.

Consolidated Statements of Cash Flows

(Amounts in thousands)

	Year Ended December,		
	2017	**2016**	**2015**
Cash flows from operating activities:			
Net loss	$ (54,818)	$ (23,814)	$ (46,459)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation	373	400	377
Stock-based compensation	2,841	2,758	1,751
Change in fair value of common stock warrant liability	30,403	590	—
Accretion and amortization of discounts and premiums on marketable securities, net	(6)	34	45
Issuance costs attributable to common stock warrant liability	111	415	—
Changes in operating assets and liabilities:			
Prepaid expenses and other current assets	2,972	(946)	(3,783)
Restricted cash held for Ikaria, Inc.	—	—	10,812
Restricted cash held as security deposit	156	(251)	(457)
Other non-current assets	1,437	5,210	(6,701)
Accounts payable, accrued research and development, accrued expenses and other liabilities	791	(1,860)	(1,849)
Net cash used in operating activities	(15,740)	(17,464)	(46,264)
Cash flows from investing activities:			
Capital expenditures	—	(22)	(458)
Purchase of marketable securities	(5,981)	—	(22,757)
Proceeds from sale of marketable securities	8,558	12,221	4,910
Net cash provided by (used in) investing activities	2,577	12,199	(18,305)
Cash flows from financing activities:			
Proceeds from sale of membership units	—	—	1
Proceeds received from exercise of options	—	—	186
Proceeds received from exercise of warrants	2,299	—	—
Proceeds from sale of common stock in ATM Offering, net of commissions and offering expenses	—	2,144	—
Proceeds from exercise of warrants pending issuance of common shares	231	—	—
Proceeds from sale of Units in Secondary Offering, net of commissions and offering expenses	(235)	11,191	—
Proceeds from sale of Units in PIPE Offering, net of offering expenses	22,759	—	—
Proceeds from sale of Units in Direct Offering, net of commissions and offering expenses	2,730	—	—
Tax withholding payments for stock compensation	—	(128)	—
Cash proceeds from issuance of common stock from initial public offering, net of issuance costs	—	—	53,827
Net cash provided by financing activities	27,784	13,207	54,014
Net change in cash and cash equivalents	14,621	7,942	(10,555)
Cash and cash equivalents at beginning of year	14,202	6,260	16,815
Cash and cash equivalents at end of year	$ 28,823	$ 14,202	$ 6,260
Non-cash investing activities:			
Change in unrealized holding gains on marketable securities, net	$ (4)	$ 19	$ (19)
Non-cash financing activities:			
Conversion of warrant liability to common stock upon exercise of warrants	$ 4,411	$ —	$ —
Unpaid expenses related to offerings	$ 28	$ 304	$ —

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

BELLEROPHON THERAPEUTICS, INC.

Notes to Consolidated Financial Statements

(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 financial statements have been prepared in accordance with U.S. generally accepted accounting principles or GAAP. Intercompany balances and transactions have been eliminated. The Company operates in one reportable segment and solely within the United States. Accordingly, no segment or geographic information has been presented.

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 prepaid and accrued research and development expenses, stock-based compensation, common stock warrant liability 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, and expected term. For restricted stock, the fair value is the closing market price per share on the grant date. See Note 9 - *Stock-Based Compensation* for a description of these assumptions.

(d) Common Stock Warrant Liability

The Company accounts for common stock warrants issued as freestanding instruments in accordance with applicable accounting guidance as either liabilities or as equity instruments depending on the specific terms of the warrant agreement. The Company classifies warrant liability 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 7 - *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, 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.

(g) Research and Development Expense

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

(h) Reclassification

Restricted cash previously included in cash and cash equivalents has been reclassified to conform to the current year presentation.

(i) New Accounting Pronouncements

Adopted

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

Not Yet Adopted

In 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 and early adoption is permitted. The Company is assessing ASU 2016-02’s impact and will adopt it when effective.

In November 2016, the FASB issued ASU 2016-18 “Statement of Cash Flows: Restricted Cash”, which eliminates the diversity in practice related to the inclusion of restricted cash in the statement of cash flows by requiring that a statement of cash flows include the change during the period in restricted cash when reconciling beginning-of-period and end-of-period total amounts shown on the statement of cash flows. ASU 2016-18 is effective for annual and interim reporting periods beginning after December 15, 2017. ASU 2016-18 provides for retrospective application for all periods presented. For the years ended December 31, 2017, 2016, and 2015, net cash used in operation activities will (decrease)/increase by ($0.2) million, $0.3 million and ($10.4) million, respectively, as a result of the adoption of this standard.

(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 seek 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 $28.8 million and marketable securities of $3.0 million as of December 31, 2017.

The Company's existing cash and cash equivalents and marketable securities as of December 31, 2017 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. In addition, as of December 31, 2017, the Company had $2.2 million prepayments of research and development expenses related to its amended drug supply agreement with Ikaria and the clinical research organization it has partnered with for the first of the two Phase 3 clinical trials for INOpulse for PAH. The corresponding prepayments balance as of December 31, 2016 was $7.2 million. These prepayment amounts are presented on the respective consolidated balance sheets as follows (in thousands):

	December 31, 2017	December 31, 2016
Prepaid expenses and other current assets	2,223	5,842
Other non-current assets	—	1,406
	2,223	7,248

On May 5, 2016, the Company filed a shelf registration statement with the SEC on Form S-3, which as amended became effective on May 23, 2016. The shelf registration will allow the Company to issue, from time to time at prices and on terms to be determined prior to the time of any such offering, up to $30.0 million of any combination of the Company's common stock, preferred stock, debt securities, warrants, rights, purchase contracts or units, either individually or in units. During 2016 and as of December 31, 2017, the Company had sold 1,025,793 shares of its common stock for gross and net proceeds of $2.2 million and $2.1 million, respectively.

On October 25, 2016, the Company filed a registration statement on Form S-1 with the SEC, which as amended became effective on November 22, 2016. On November 29, 2016, the Company completed the sale of 17,142,858 Class A Units consisting of an aggregate of 17,142,858 shares of its common stock and warrants exercisable for up to 17,142,858 shares of its common stock at a price of $0.70 per Unit, or the Secondary Offering, resulting in net proceeds of $10.9 million, after deducting placement fees of $0.8 million and offering costs of $0.3 million. Each warrant has an exercise price per full share of common stock equal to $0.80, is immediately exercisable and will expire five years from the date on which such warrant becomes exercisable. The warrants require cash settlement by the Company under certain situations. During the year ended December 31, 2017, the Company received proceeds of $2.3 million and issued common stock for the exercise of 2,872,585 warrants and received proceeds of $0.2 million for 289,269 warrants exercised and shares to be issued at December 31, 2017. Refer to Note 6 - Common Stock Warrant Liability for further details on the warrants.

On May 9, 2017, the Company entered into a Securities Purchase Agreement, or the Purchase Agreement, with a single institutional investor for the sale of 2,000,000 shares of its common stock at a purchase price of $1.50 per share and warrants to purchase up to an aggregate of 1,000,000 shares of its common stock, or the Direct Offering. The warrants 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 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.

On September 26, 2017, the Company entered into a Securities Purchase Agreement, or the PIPE Purchase Agreement, pursuant to which the Company sold an aggregate of 19,449,834 shares of its common stock at a purchase price of $1.205 per share and warrants to purchase up to an aggregate of 19,449,834 shares of its common stock, or the PIPE Offering. The warrants will be initially exercisable commencing six months from the issuance date at an exercise price equal to $1.2420 per full share of common stock, subject to adjustments as provided under the terms of the warrants. The warrants are exercisable for five years from the initial exercise date. The closing of the sales of these securities under the PIPE Purchase Agreement occurred on September 29, 2017. The aggregate gross and net proceeds for the PIPE Offering were $23.4 million and $22.8 million, respectively.

In connection with the PIPE Offering, the Company entered into a Registration Rights Agreement, pursuant to which the Company timely filed a registration statement on Form S-3 declared effective by the SEC on November 6, 2017 and is obligated to maintain the registration until all registrable securities may be sold pursuant to Rule 144 under the Securities Act, without restriction as to volume. The Registration Rights Agreement provides for cash penalties of up to 3% of the gross proceeds of the PIPE Offering for the Company's failure to satisfy specified filing and effectiveness time periods. As of December 31, 2017, no liability had been recorded under the Registration Rights Agreement.

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 Annual Report on Form 10-K.

Based on such evaluation, management believes that the Company's existing cash and cash equivalents and marketable securities as of December 31, 2017 and proceeds that became and will become available to the Company upon sale of the Company's state net operating losses, or NOL, and research and development, or R&D, tax credits under the State of New Jersey's Technology Business Tax Certificate Transfer Program will be sufficient to satisfy the Company's operating cash needs for at least one year after the filing of this Annual Report.

The Technology Business Tax Certificate Transfer Program enables qualified, unprofitable New Jersey based technology or biotechnology companies to sell a percentage of NOL and R&D tax credits to unrelated profitable corporations, subject to meeting certain eligibility criteria. Based on consideration of various factors, including application processing time and past trend of benefits made available under the program, management believes that it is probable that the Company's plans to sell NOLs can be effectively implemented to address the Company's short term financial needs. The Company participated

in this program during November 2016 and February 2018 through the sale of R&D tax credits and NOLs generated in the years ended December 31, 2015 and 2016, respectively. The proceeds from such sales are recorded as Income tax benefit when sales occur or proceeds are received. In February 2018, the Company received $5.3 million from such sales.

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

Until such time, if ever, as the Company can generate substantial product revenues, its expects to finance its cash needs through a combination of equity and debt offerings, sales of state NOLs and R&D credits subject to program availability and approval, 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 our 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, or unable to sell its state NOLs and R&D credits, 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. In addition, the timing of when existing and new capital resources are used and received may not align with the period of time evaluated by management for going concern purposes such that management may be required to conclude that substantial doubt about the Company's ability to continue as a going concern in accordance with relevant accounting guidance may exist in future periods. Based on current planned expenditures, management anticipates by the time it reports on the first quarter of 2018, that the Company without obtaining additional funds will not have sufficient liquidity from existing resources to satisfy its obligations when they become due for a period of one year from the date of anticipated filing of the Company's quarterly report for the period ending March 31, 2018.

(4) Marketable Securities

The Company considers all of its current investments to be available-for-sale. Marketable securities as of December 31, 2017, all of which were in a loss position, consist of the following (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
US Government bonds	3,000	—	(4)	2,996
Total	3,000	—	(4)	2,996

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

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

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

	December 31, 2017		December 31, 2016	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Due within one year	3,000	2,996	5,571	5,571
	3,000	2,996	5,571	5,571

(5) Property and Equipment

Property and equipment as of December 31, 2017 and 2016 consist of the following (in thousands):

	December 31, 2017	December 31, 2016
Machinery and equipment	$ 2,048	$ 2,943
Leasehold improvements	204	204
Furniture and fixtures	276	276
Property and equipment, gross	2,528	3,423
Less accumulated depreciation	(1,502)	(2,024)
	$ 1,026	$ 1,399

(6) Common Stock Warrants

On November 29, 2016, the Company issued 17,142,858 warrants that were immediately exercisable and will expire 5 years from issuance at an exercise price of $0.80 per share. As the warrants, under certain situations, could require cash settlement, the warrants were classified as liabilities and are recorded at estimated fair value using a Black-Scholes-Merton pricing model. As of December 31, 2017, 13,981,004 of these warrants were outstanding.

On May 15, 2017, the Company issued to an investor warrants 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 December 31, 2017, all of these warrants were outstanding.

On September 29, 2017, the Company issued warrants to purchase 19,449,834 shares that will be initially 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 December 31, 2017, all of these warrants were outstanding.

The following table summarizes warrant activity for the year ended December 31, 2017 (fair value amount in thousands):

	Equity Classified	Liability Classified	
	Warrants	Warrants	Estimated Fair Value
Beginning balance	—	17,142,858	$ 5,215
Exercises	—	(3,161,854)	(4,411)
Additions	19,449,834	1,060,000	1,118
Change in fair value of common stock warrant liability recognized in consolidated statement of operations	—	—	30,403
Ending balance	19,449,834	15,041,004	$ 32,325

The following table summarizes warrant activity for the year ended December 31, 2016 (fair value amount in thousands):

	Liability Classified Warrants	Estimated Fair Value
Beginning balance	—	$ —
Additions pursuant to Secondary Offering	17,142,858	4,625
Change in fair value of common stock warrant liability recognized in consolidated statement of operations	—	590
Ending Balance	17,142,858	$ 5,215

See Note 7 for determination of fair value of common stock warrant liability.

(7) 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 December 31, 2017 for financial instruments measured at fair value on a recurring basis (in thousands):

(Dollar amounts in thousands)	Level 1	Level 2	Level 3	Total
Marketable securities	$ —	$ 2,996	$ —	$ 2,996
Common stock warrant liability	$ —	$ —	$ 32,325	$ 32,325

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

(Dollar amounts in thousands)	Level 1	Level 2	Level 3	Total
Marketable securities	$ —	$ 5,571	$ —	$ 5,571
Common stock warrant liability	$ —	$ —	$ 5,215	$ 5,215

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

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

	December 31, 2017	December 31, 2016
Valuation assumptions:		
Risk-free interest rate	2.08%	1.91%
Expected volatility	96.24%	83.73%
Expected term (in years)	4.0	4.9
Dividend yield	—%	—%

(8) Restructuring Charges

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

The following table summarizes restructuring activities for the years ended December 31, 2017 and 2016 (in thousands):

	December 31, 2017	December 31, 2016
Opening balance (a)	$ 110	969
Reversals to general and administrative expenses (b)	—	(352)
Cash payments	(110)	(507)
Ending balance	$ —	$ 110

(a) Included in Accrued expenses.
(b) Pursuant to resolution of certain matters that resulted in cessation of severance payments

(9) Stock-Based Compensation

Determining the appropriate fair value of stock-based awards requires the input of subjective assumptions, the expected term of the option and expected volatility. The Company uses the Black-Scholes-Merton option pricing model to value its stock option awards. The assumptions used in calculating the fair value of stock-based awards represent management's best estimates and involve inherent uncertainties and the application of management's judgment. The expected term of stock options is estimated using the "simplified method," as the Company has no historical information to develop reasonable expectations about future exercise patterns and post-vesting employment termination behavior for its stock options grants. The simplified method is based on the average of the vesting tranches and the contractual life of each grant. For volatility, the Company uses comparable public companies as a basis for its expected volatility to calculate the fair value of option grants due

to its limited history as a public company. The risk-free interest rate is based on U.S. Treasury notes with a term approximating the expected term of the option. For restricted stock, the fair value is the closing market price per share on the grant date. The estimation of the number of stock awards that will ultimately vest requires judgment, and to the extent actual results or revised estimates differ from the Company's current estimates, such amounts will be recorded as an adjustment in the period in which estimates are revised.

Incentive Plans

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

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 December 31, 2017, the Company had additional 4,142,088 shares available for grant.

As of December 31, 2017, there was approximately $1.6 million of total unrecognized compensation expense related to unvested stock awards. This expense is expected to be recognized over a weighted-average period of 1.7 years.

No tax benefit was recognized during the years ended December 31, 2017, 2016 and 2015 related to stock-based compensation expense since the Company incurred operating losses and has established a full valuation allowance to offset all the potential tax benefits associated with its deferred tax assets.

Options

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

The weighted average grant-date fair value of options issued during the year ended December 31, 2017, 2016 and 2015 was $1.05, $0.52 and $6.65, respectively. The following are the weighted average assumptions used in estimating the fair value of options issued during the years ended December 31, 2017, 2016 and 2015.

	Year Ended		
	December 31, 2017	**December 31, 2016**	**December 31, 2015**
Valuation assumptions:			
Risk-free interest rate	2.04%	1.90%	1.60%
Expected volatility	91.02%	82.48%	79.18%
Expected term (in years)	6.0	6.2	6.1
Dividend yield	—%	—%	—%

A summary of option activity under the 2015 Plan and 2014 Plan for the years ended December 31, 2017, 2016 and 2015 is presented below:

	Bellerophon 2015 and 2014 Equity Incentive Plans			
	Shares	Exercise Price	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)
Options outstanding as of December 31, 2014	508,280	$ 13.28	$ 13.28	9.5
Granted	443,607	4.12 - 12.00	$ 9.53	
Forfeited	(246,707)	8.23 - 13.28	9.95	
Options outstanding as of December 31, 2015	705,180	$ 4.12 - 13.28	$ 12.08	8.7
Granted	2,530,770	0.49 - 2.30	0.73	
Forfeited	(46,069)	10.22 - 13.28	11.69	
Options outstanding as of December 31, 2016	3,189,881	$ 0.49 - 13.28	$ 3.08	9.4
Granted	106,300	1.12 - 2.25	1.39	
Exercised	(1,000)	0.49	0.49	
Forfeited	(25,298)	0.49 - 12.00	1.71	
Options outstanding as of December 31, 2017	3,269,883	$ 0.49 - 13.28	$ 3.04	8.4
Options vested and exercisable as of December 31, 2017	1,112,702	$ 0.49 - 13.28	$ 5.74	7.9

The intrinsic value of options outstanding, vested and exercisable as of December 31, 2017 was $1.2 million.

Restricted Stock

A summary of restricted stock activity under the 2015 Plan for the years ended years ended December 31, 2017, 2016 and 2015 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, 2014	—	—	$ —	—
Granted	90,909	3.86	0.4	
Vested	(13,116)	(3.08)	(0.1)	
Restricted stock outstanding as of December 31, 2015	77,793	3.99	$ 0.3	0.7
Granted	519,871	2.40	1.2	
Vested	(417,817)	(2.75)	(1.2)	
Forfeited	(24,001)	(3.69)	(0.1)	
Restricted stock outstanding as of December 31, 2016	155,846	2.05	$ 0.3	0.0
Granted	873,310	1.45	1.3	
Vested	(700,626)	(1.60)	(1.1)	
Restricted stock outstanding as of December 31, 2017	328,530	1.42	$ 0.5	0.2

Ikaria Equity Incentive Plans for Periods Prior to February 12, 2014

Options

The Company has outstanding options that were assumed during its spin-out from Ikaria, Inc., or Ikaria. A summary of option activity under the assumed Ikaria 2007 stock option plan and the assumed Ikaria 2010 long term incentive plan for the years ended December 31, 2017, 2016 and 2015 is presented below:

	Ikaria Equity Incentive Plans for Periods Prior to February 12, 2014			
	Shares	Range of Exercise Price	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)
Options outstanding, vested and exercisable as of December 31, 2014	577,975	$ 0.26 - 17.92	$ 7.11	4.5
Exercised	(126,499)	1.13 - 7.77	1.47	
Forfeited	(337,767)	7.77 - 17.92	8.61	
Options outstanding, vested and exercisable as of December 31, 2015	113,709	$ 0.26 - 17.92	$ 8.93	5.2
Forfeited	(26,340)	0.26 - 17.92	8.23	
Options outstanding, vested and exercisable as of December 31, 2016	87,369	$ 7.77 - 17.92	$ 9.14	4.3
Forfeited	(15,160)	7.77 - 14.91	8.81	
Options outstanding, vested and exercisable as of December 31, 2017	72,209	$ 7.77 - 17.92	$ 9.21	4

There were no options exercised during the years ended December 31, 2017 and 2016. The intrinsic value of options exercised during the year ended December 31, 2015 was $0.4 million. The intrinsic value of options outstanding, vested and exercisable as of December 31, 2017 was de minimis.

Stock-Based Compensation Expense, Net of Estimated Forfeitures

The following table summarizes the stock-based compensation expense for the years ended December 31, 2017, 2016 and 2015. The following disclosures include stock-based compensation expense recognized under the 2015 Plan and the 2014 Plan (in thousands):

	Year Ended December 31,		
(in thousands)	2017	2016	2015
Research and development	$ 850	$ 689	$ 364
General and administrative	1,991	2,069	1,387
Total expense	$ 2,841	$ 2,758	$ 1,751

(10) Income Taxes

Prior to its conversion to a Delaware corporation in February 2015, the Company was a Delaware limited liability company, or LLC, that passed through income and losses to its members for U.S. federal and state income tax purposes. As a result of its conversion to a Delaware corporation, the Company recognized deferred income taxes through income tax expense related to temporary differences that existed as of the date of its tax status change.

As of the date of the conversion to a taxable corporation, the Company recognized approximately $17.9 million of deferred tax assets which consisted principally of excess tax-over-book basis in intangible assets and property, plant and equipment and certain accruals that were transferred from the limited liability company to the corporation. The Company also recognized a full valuation allowance since it had a cumulative loss position and no positive evidence of taxable income to support recovery of the deferred tax assets. The Company incurred transaction costs of approximately $8.1 million in connection with its initial public offering in 2015 were recorded as a reduction of equity. These costs are nondeductible until

and if the Company liquidates or terminates operations, which is not expected in the foreseeable future. Therefore, the Company did not recognize a deferred tax asset for such costs.

The Company's tax rate for 2017 is a 0.00% because the Company expects to generate additional losses and currently has a full valuation allowance. The Company's tax rate for 2016 is a 1.8% benefit due to the sale of R&D tax credits in November 2016. The Company was an LLC as of December 31, 2014 and until February 12, 2015 when it converted to a C corporation. Although, the Company was not subject to income taxes in any jurisdiction while it was an LLC, one of the Company's subsidiaries was a C-corporation and subject to state and federal income taxes. This subsidiary generated an immaterial operating loss in the short year ended February 12, 2015. Accordingly, no provision or benefit for income taxes is reflected in the Company's 2015 consolidated financial statements.

On December 22, 2017, the Tax Cuts and Jobs Act (H.R. 1), or the Tax Act, was signed into law. The Tax Act contains significant changes to corporate taxation, including (i) the reduction of the corporate income tax rate to 21%, (ii) the acceleration of expensing for certain business assets, (iii) the one-time transition tax related to the transition of U.S. international tax from a worldwide tax system to a territorial tax system, (iv) the repeal of the domestic production deduction, (v) additional limitations on the deductibility of interest expense, and (vi) expanded limitations on executive compensation.

The key impacts of the Tax Act on our financial statement for the year ended December 31, 2017, were the re-measurement of deferred tax balances to the new corporate tax rate. Due to the fact that the company maintains a full valuation allowance on its deferred tax assets and there was no impact to the balance sheet or statements of operations for this re-measurement.

We may be subject to certain limitations in our annual utilization of NOL carry forwards to off-set future taxable income (and of tax credit carry forwards to off-set future tax expense) pursuant to Section 382 of the Internal Revenue Code, which could result in tax attributes expiring unused.

A reconciliation of the statutory federal income tax rate to the Company's effective tax rate for the years ended December 31, 2017, 2016 and 2015 is as follows:

	Year Ended December 31, 2017	Year Ended December 31, 2016	Year Ended December 31, 2015
U.S. federal statutory rate	34 %	34 %	34 %
2017 Tax Act	(23.9)%	— %	— %
State and local taxes, net of federal tax effect	5.7 %	6.6 %	5.8 %
Research tax credits	10.4 %	13.7 %	15.8 %
Valuation allowance	(4.5)%	(38.9)%	(55.1)%
Prior year adjustments	0.9 %	(13.7)%	— %
Sale of R&D tax credits	— %	(1.8)%	— %
Expenses associated with common stock warrant liability (a)	(18.9)%	(1.3)%	— %
Incentive stock options, non-deductible	(3.8)%	(0.4)%	(0.5)%
	0 %	(1.8)%	0 %

(a) Represents change in fair value and attributable issuance costs

Deferred taxes as of December 31, 2017 and 2016 reflect the tax effects of the differences between the amounts recorded as assets and liabilities for financial reporting purposes and the comparable amounts recorded for income tax purposes.

Significant components of the deferred tax assets (liabilities) at December 31, 2017 are as follows (in thousands):

	December 31, 2017	
	Assets	(Liabilities)
Net operating loss carryforwards	$ 21,006	$ —
Research tax credit carryforwards	22,246	—
Property and equipment	—	(89)
Stock based compensation	980	—
Intangible assets	7,354	—
Accrued expenses	562	—
Subtotal	52,148	(89)
Valuation allowance	(52,059)	—
Total deferred tax assets (liabilities)	$ 89	$ (89)
Net deferred tax assets	$ —	

Significant components of the deferred tax assets (liabilities) at December 31, 2016 are as follows (in thousands):

	December 31, 2016	
	Assets	(Liabilities)
Net operating loss carryforwards	$ 21,469	$ —
Research tax credit carryforwards	15,310	—
Property and equipment	—	(161)
Stock based compensation	881	—
Intangible assets	11,389	—
Accrued expenses	713	—
Subtotal	49,762	(161)
Valuation allowance	(49,601)	—
Total deferred tax assets (liabilities)	$ 161	$ (161)
Net deferred tax assets	$ —	

A valuation allowance is provided when it is more likely than not that some portion or all of the deferred tax assets will not be realized. As of December 31, 2017, management believed that it was more likely than not that the deferred tax assets would not be realized, based on future operations, consideration of tax strategies and the reversal of deferred tax liabilities. The valuation allowance is required until the Company has sufficient positive evidence of taxable income necessary to support realization of its deferred tax assets. A valuation allowance release is recognized as an income tax benefit.

As of December 31, 2017, the Company has available net operating loss, or NOL, carry forwards for federal income tax reporting purposes of approximately $69.3 million and for state income tax reporting purposes of approximately $90.6 million, which expire at various dates between fiscal 2034 and 2037. 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 in February 2018 and plans to sell additional NOLs and credits under the same program later in 2018 subject to state approval. As of December 31, 2017 and 2016, the Company had no material uncertain tax positions.

(11) Net Loss Per Share

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

The Company is reporting a net loss for the years ended December 31, 2017, 2016 and 2015, therefore diluted net loss per share is the same as the basic net loss per share.

As of December 31, 2017, the Company had 34,780,107 common stock warrants, 3,342,092 options to purchase shares and 328,530 restricted shares outstanding that have been excluded from the computation of diluted weighted average shares outstanding, because such securities had an antidilutive impact due to the loss reported. As of December 31, 2016, the

Company had 17,142,858 common stock warrants, 3,277,250 options to purchase shares and 155,846 restricted shares outstanding that have been excluded from the computation of diluted weighted average units outstanding, because such securities had an antidilutive impact due to the loss reported. As of December 31, 2015, the Company had 818,899 options to purchase units and 77,793 restricted stock awards outstanding that have been excluded from the computation of diluted weighted average units outstanding, because such securities had an antidilutive impact due to the loss reported.

(12) 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 the date 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.

Operating Leases

The following is a summary of the Company's long-term contractual cash obligations as of December 31, 2017 (in thousands).

	Operating Lease(1)
2018	$ 642
2019	653
2020	663
2021	674
2022	686
Thereafter	172
Total	$ 3,490

(1) Operating lease obligations include the lease agreement the Company entered into on August 6, 2015 for office space in Warren, New Jersey.

Rent expense is calculated on the straight-line basis and amounted to approximately $0.7 million, $0.7 million, $0.4 million for the years ended December 31, 2017, 2016 and 2015, respectively.

Royalty payments and success-based milestones associated with the Company's license and supply agreements with Ikaria have not been included in the above table of contractual obligations as the Company cannot reasonably estimate if or when they will occur.

License Agreement with Ikaria

In February 2014, the Company entered into a cross-license, technology transfer and regulatory matters agreement with a subsidiary of Ikaria. Pursuant to the terms of the license agreement, Ikaria granted to the Company a fully paid-up, non-royalty-bearing, exclusive license under specified intellectual property rights controlled by Ikaria to engage in the development, manufacture and commercialization of nitric oxide, devices to deliver nitric oxide and related services for or in connection with out-patient, chronic treatment of patients who have PAH, PH-COPD or PH associated with idiopathic pulmonary fibrosis, or PH-IPF. Pursuant to the terms of the license agreement, the Company granted Ikaria a fully paid-up, non-royalty-bearing, exclusive license under specified intellectual property rights that the Company controls to engage in the development, manufacture and commercialization of products and services for or used in connection with the diagnosis, prevention or treatment, whether in- or out-patient, of certain conditions and diseases other than PAH, PH-COPD or PH-IPF and for the use

of nitric oxide to treat or prevent conditions that are primarily managed in the hospital. The Company agreed that, during the term of the license agreement, it will not, without the prior written consent of Ikaria, grant a sublicense under any of the intellectual property licensed to the Company under the license agreement to any of its affiliates or any third party, in either case, that directly or indirectly competes with Ikaria's nitric oxide business. In July 2015, the Company and Ikaria entered into an amendment to the license agreement to expand the scope of the Company's license to allow the Company to develop its INOpulse program for the treatment of three additional indications: chronic thromboembolic PH, or CTEPH, PH associated with sarcoidosis and PH associated with pulmonary edema from high altitude sickness. Subject to the terms set forth therein, the amendment to the license agreement also provides that the Company will pay Ikaria a royalty equal to 5% of net sales of any commercialized products for the three additional indications. In November 2015, the Company entered into an amendment to its exclusive cross-license, technology transfer and regulatory matters agreement with Ikaria that included a royalty equal to 3% of net sales of any commercial products for PAH.

Agreements Not to Compete

In September 2013, October 2013 and February 2014, the Company entered into an agreement not to compete with Ikaria, each of which was amended in July 2015, or, collectively, the agreements not to compete. Pursuant to the agreements not to compete, as amended, the Company agreed not to engage, anywhere in the world, in any manner, directly or indirectly, until the earlier of five years after the effective date of such agreement not to compete amendments or the date on which Ikaria and all of its subsidiaries are no longer engaged in such business as specified in the agreements.

Separation and Distribution Agreement

In February 2014, the Company and Ikaria entered into a separation and distribution agreement which set forth provisions relating to the separation of the Company's business from Ikaria's other businesses. The separation and distribution agreement described the assets and liabilities that remained with or were transferred to the Company and those that remained with or were transferred to Ikaria. The separation and distribution agreement provides for a full and complete release and discharge of all liabilities between Ikaria and the Company, except as expressly set forth in the agreement. The Company and Ikaria each agreed to indemnify, defend and hold harmless the other party and its subsidiaries, and each of their respective past and present directors, officers and employees, and each of their respective permitted successors and assigns, from any and all damages relating to, arising out of or resulting from, among other things, the Company's business and certain additional specified liabilities or Ikaria's business and certain additional specified liabilities, as applicable.

Transition Services Agreement (TSA) with Ikaria

In February 2014, the Company and Ikaria entered into the TSA, pursuant to which Ikaria agreed to use commercially reasonable efforts to provide certain transition services to the Company, which services include management/executive, human resources, real estate, information technology, accounting, financial planning and analysis, legal, quality and regulatory support. The TSA agreement was terminated effective September 30, 2015 and the remaining cash held in escrow to guarantee payment of the monthly service fees by the Company was released.

Effective as of January 1, 2015, the Company entered into a services agreement with Ikaria, or the 2015 Services Agreement, pursuant to which the Company had agreed to use commercially reasonable efforts to provide certain services to Ikaria, including services related to regulatory matters, drug and device safety, clinical operations, biometrics and scientific affairs. In addition, pursuant to the 2015 Service Agreement, Ikaria had agreed to use commercially reasonable efforts to provide services to the Company, including information technology and servicing and upgrade of devices. The 2015 Services Agreement was terminated effective September 30, 2015.

The following table summarizes the amounts recorded under the TSA and the 2015 Services Agreement for the year ended December 31, 2015 (in millions):

(in millions)	Year Ended December 31, 2015
Expense in connection with the TSA	7.0
Other operating income in connection with the 2015 Services Agreement	(1.7)
Expense in connection with the 2015 Services Agreement	0.2

In the course of its normal business operations, the Company also enters into agreements with contract service providers and others to assist in the performance of its research and development and manufacturing activities. The Company 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.

In August 2009, the Company entered into a license agreement with BioLineRx Ltd. and BioLine Innovations Jerusalem L.P., which are referred to collectively as BioLine, under which the Company obtained an exclusive worldwide license to BCM. The Company does not intend to proceed with further clinical development of BCM until and unless it can determine an alternative path forward. Consequently, any future milestone and royalty payments to BioLine would depend on finding a path forward for future clinical development.

(13) Quarterly Financial Data (unaudited)

	Three Months Ended December 31,		Three Months Ended September 30,		Three Months Ended June 30,		Three Months Ended March 31,	
(in thousands, except share/ and per share data)	2017	2016	2017	2016	2017	2016	2017	2016
Operating expenses:								
Research and development	$ 5,390	$ 5,111	$ 4,438	$ 2,472	$ 4,689	$ 3,954	$ 3,337	$ 5,113
General and administrative	1,919	2,181	1,746	1,745	1,634	1,205	1,446	1,976
Total operating expenses	7,309	7,292	6,184	4,217	6,323	5,159	4,783	7,089
Loss from operations	(7,309)	(7,292)	(6,184)	(4,217)	(6,323)	(5,159)	(4,783)	(7,089)
Change in fair value of common stock warrant liability	(16,948)	(590)	(1,435)	—	2,367	—	(14,387)	—
Interest and other income	98	21	33	22	26	22	27	30
Pre-tax loss	(24,159)	(7,861)	(7,586)	(4,195)	(3,930)	(5,137)	(19,143)	(7,059)
Income tax benefit	—	(438)	—	—	—	—	—	—
Net loss	$ (24,159)	$ (7,423)	$ (7,586)	$ (4,195)	$ (3,930)	$ (5,137)	$ (19,143)	$ (7,059)
Weighted average shares outstanding:								
Basic and diluted	55,109,847	20,186,996	34,989,831	13,854,188	33,558,669	13,093,176	31,934,253	13,053,007
Net loss per share:								
Basic and diluted	$ (0.44)	$ (0.37)	$ (0.22)	$ (0.30)	$ (0.12)	$ (0.39)	$ (0.60)	$ (0.54)

PART IV

Item 15. Exhibits and Financial Statement Schedules

(1) Financial Statements

Our consolidated financial statements are set forth in Part II, Item 8 of this Annual Report on Form 10-K and are incorporated herein by reference.

(2) Financial Statement Schedules

No financial statement schedules have been filed as part of this Annual Report on Form 10-K because they are not applicable or are not required or because the information is otherwise included herein.

(3) Exhibits

The exhibits filed as part of this Annual Report on Form 10-K are set forth on the Exhibit Index immediately following our financial statements. The Exhibit Index is incorporated herein by reference.

EXHIBIT INDEX

Exhibit Number	Description of Exhibit
23.1	Consent of KPMG LLP independent registered public accounting firm
31.1	Certification of Principal Executive Officer pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as amended
31.2	Certification of Principal Financial Officer pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as amended
32	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

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

Date: May 17, 2018

BELLEROPHON THERAPEUTICS, INC.

By: /s/ Fabian Tenenbaum

Fabian Tenenbaum

Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Bellerophon Therapeutics, Inc.:

We consent to the incorporation by reference in the registration statements (Nos. 333-219387, 333-210312 and 333-202069) on Form S-8, the registration statements (Nos. 333-221087 and 333-211166) on Form S-3, and the registration statement (No. 333-214230) on Form S-1 of Bellerophon Therapeutics, Inc. of our report dated March 15, 2018, with respect to the consolidated balance sheets of Bellerophon Therapeutics, Inc. (formerly Bellerophon Therapeutics LLC) as of December 31, 2017 and 2016, and the related consolidated statements of operations, comprehensive loss, changes in stockholders'/members' equity (deficiency in assets), and cash flows for each of the years in the three-year period ended December 31, 2017, and the related notes (collectively, the "consolidated financial statements"), which report appears in the December 31, 2017 annual report on Form 10-K/A of Bellerophon Therapeutics, Inc.

/s/ KPMG LLP
Short Hills, New Jersey
May 17, 2018

Exhibit 31.1

CERTIFICATION

I, Fabian Tenenbaum, certify that:

1. I have reviewed this Annual Report on Form 10-K of Bellerophon Therapeutics, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 17, 2018

By: /s/ Fabian Tenenbuam

Fabian Tenenbaum
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, Assaf Korner, certify that:

1. I have reviewed this Annual Report on Form 10-K of Bellerophon Therapeutics, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 17, 2018

By: /s/ Assaf Korner

Assaf Korner
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32

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 Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

Date: May 17, 2018 By: /s/ Fabian Tenenbaum

Fabian Tenenbaum
Chief Executive Officer
(Principal Executive Officer)

Date: May 17, 2018 By: /s/ Assaf Korner

Assaf Korner
Chief Financial Officer
(Principal Financial Officer)