UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

POST-EFFECTIVE AMENDMENT NO. 1 TO

FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Bellerophon Therapeutics, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware (State or Other Jurisdiction of Incorporation or Organization)

2834 (Primary Standard Industrial Classification Code Number) 47-3116175 (I.R.S. Employer Identification Number)

184 Liberty Corner Road, Suite 302
Warren, New Jersey 07059
(908) 574-4770
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Fabian Tenenbaum Chief Executive Officer Bellerophon Therapeutics, Inc. 184 Liberty Corner Road, Suite 302 Warren, New Jersey 07059 (908) 574-4770

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:

Kenneth R. Koch, Esq. Jeffrey P. Schultz, Esq. Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. Chrysler Center 666 Third Avenue New York, NY 10017 (212) 935-3000 Joseph A. Smith, Esq. Ellenoff Grossman & Schole LLP 1345 Avenue of the Americas New York, NY 10105 (212) 370-1300

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of
1933, as amended (the "Securities Act"), check the following box. ⊠

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \Box

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \Box

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \boxtimes (File No. 333-214230)

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

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

This post-effective amendment shall become effective upon filing with the Securities and Exchange Commission in accordance with Rule 462(d) under the Securities Act of 1933, as amended.

EXPLANATORY NOTE

This Post-Effective Amendment No. 1 (this "Amendment") relates to the Registrant's Registration Statement on Form S-1 (File No. 333-214230), as amended, declared effective on November 22, 2016 by the Securities and Exchange Commission. The Registrant is filing this Amendment for the sole purpose of replacing Exhibit 5.1 to the Registration Statement. This Amendment does not modify any provision of Part I or Part II of the Registration Statement other than Item 16(a) of Part II as set forth below.

PART II INFORMATION NOT REQUIRED IN PROSPECTUS

Item 16. Exhibits and financial statement schedules.

(a) Exhibits.

Exhibit <u>Number</u> 5.1	Description of Document Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
24.1(a)	Power of Attorney (incorporated by reference to the signature page of the Registrant's Registration Statement on Form S-1, filed with the SEC on October 25, 2016)

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Warren, New Jersey, on the 23rd day of November, 2016.

BELLEROPHON THERAPEUTICS, INC.

By: /s/ Fabian Tenenbaum
Fabian Tenenbaum
Chief Executive Officer

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date	
/s/ Fabian Tenenbaum Fabian Tenenbaum	Chief Executive Officer (Principal Executive Officer and Principal Financial	November 23, 2016	
Fabidii Tellelibadiii	Officer)		
/s/ Jonathan M. Peacock	Chairman	November 23, 2016	
Jonathan M. Peacock			
By: /s/ Naseem Amin*	Director	November 23, 2016	
Naseem Amin			
By: /s/ Scott Bruder*	Director	November 23, 2016	
Scott Bruder	-		
By: /s/ Mary Ann Cloyd*	Director	November 23, 2016	
Mary Ann Cloyd	-		
By: /s/ Matthew Holt*	Director	November 23, 2016	
Matthew Holt	-	•	
By: /s/ Jens Luehring*	Director	November 23, 2016	
Jens Luehring	-	,	
By: /s/ Andre V. Moura*	Director	November 23, 2016	
Andre V. Moura	-		
By: /s/ Daniel Tassé*	Director	November 23, 2016	
Daniel Tassé	-		
By: /s/ Adam Weinstein*	Director	November 23, 2016	
Adam Weinstein	-		
* Pursuant to Power of Attorney			
By: /s/ Fabian Tenenbaum	-		
Fabian Tenenbaum			

EXHIBIT INDEX

Exhibit Number	Description of Exhibit
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666 Third Avenue New York, New York 10017 212-935-3000 212-983-3115 fax www.mintz.com

November 23, 2016

Bellerophon Therapeutics, Inc. 184 Liberty Corner Road, Suite 302 Warren, New Jersey 07059

Ladies and Gentlemen:

This opinion is furnished to you in connection with the filing, pursuant to Rule 462(d) of Regulation C promulgated under the Securities Act of 1933, of a post-effective amendment to a registration statement (No. 333-214230) on Form S-1 (the "Registration Statement") with the Securities and Exchange Commission, including a related prospectus filed with the Registration Statement. The Registration Statement was declared effective on November 22, 2016 and relates to the offer and sale of (i) 17,142,858 Class A Units, each Class A Unit to consist of one share of the Company's common stock, par value \$0.01 per share (the "Common Stock," and such shares of the Common Stock as issued, the "Common Shares") and a warrant to purchase one share of Common Stock (the "Warrants," and such shares of Common Stock issuable upon exercise of the Warrants, the "Warrant Shares"), and (ii) 0 Class B Units, each Class B Unit to consist of one share of the Company's Series A Convertible Preferred Stock, par value \$0.01 per share (the "Preferred Stock," and the shares of Common Stock issuable upon the conversion of the Preferred Stock, the "Preferred Shares") and a Warrant. The Common Shares, the Preferred Shares and the Warrant Shares are hereinafter collectively referred to as the "Securities."

The Securities are to be sold by the Company pursuant to an engagement letter entered into by and between the Company and H.C. Wainwright & Co., LLC, as placement agent (the "Placement Agent"), dated as of October 14, 2016 (the "Engagement Letter"), the form of which has been filed as Exhibit 10.47 to the Registration Statement, and an amendment to the Engagement Letter entered into by and between the Company and the Placement Agent (the "Engagement Letter Amendment"), the form of which has been filed as Exhibit 10.48 to the Registration Statement.

As counsel to the Company in connection with the proposed issuance and sale of the Securities, we have examined: (i) the Company's Restated Certificate of Incorporation and Amended and Restated Bylaws, each as amended to date; (ii) the Company's Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock (the "Certificate of Designation"); (iii) certain resolutions of the Board of Directors of the Company relating to the sale of the Securities; (iv) the securities purchase agreements and Warrants pursuant to which certain of the Securities are to be sold (the Securities Purchase Agreements and Warrants are collectively referred to as the "Agreements") and (v) such other proceedings, documents and records as we have deemed necessary to enable us to render this opinion. We have relied as to certain matters on information obtained from public officials, officers of the Company and other sources believed by us to be reliable.

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

BOSTON | WASHINGTON | NEW YORK | STAMFORD | LOS ANGELES | SAN FRANCISCO | SAN DIEGO | LONDON

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In our examination, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified, photostatic or facsimile copies and the authenticity of the originals of such copies.

- 1. The Common Shares have been authorized by all necessary corporate action of the Company and, when issued and sold in accordance with the terms set forth in the Agreements against payment therefor, and as contemplated in the Registration Statement, will be validly authorized, validly issued, fully paid and nonassessable.
- 2. The Preferred Stock has been authorized by all necessary corporate action of the Company and, when issued and delivered against payment therefor as contemplated in the Registration Statement, will be validly authorized, validly issued, fully paid and nonassessable.
- 3. The Warrants, when issued and sold in accordance with the terms set forth in the Agreements, and as contemplated in the Registration Statement against payment therefor, will have been duly executed and delivered by the Company and will constitute the valid and legally binding obligations of the Company.
- 4. The Preferred Shares have been duly authorized for issuance and, when issued in accordance with the provisions of the Preferred Stock and the Certificate of Designation, will be validly issued, fully paid and nonassessable.
- 5. The Warrant Shares have been duly authorized for issuance and, when issued and delivered against payment therefor in accordance with the provisions of the Warrants, including the payment of the exercise price therefor, will be validly issued, fully paid and nonassessable.
- 6. When the Class A Units have been duly delivered by the Company against the payment of consideration therefor specified in the applicable Agreements, and as contemplated in the Registration Statement, such Class A Units will constitute valid and legally binding obligations of the Company.

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7. When the Class B Units have been duly delivered by the Company against the payment of consideration therefor specified in the applicable Agreements, and as contemplated in the Registration Statement, such Class B Units will constitute valid and legally binding obligations of the Company.

Our opinion is limited to the General Corporation Law of the State of Delaware, the laws of the State of New York and the United States federal laws, and we express no opinion with respect to the laws of any other jurisdiction. No opinion is expressed herein with respect to the qualification of the Securities under the securities or blue sky laws of any state or any foreign jurisdiction.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

We hereby consent to the filing of this opinion with the Commission as an exhibit to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K promulgated under the Securities Act and to the use of this Firm's name therein and in the Prospectus under the caption "Legal Matters." In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

/s/ Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.