

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

**SCHEDULE 13G**

**UNDER THE SECURITIES EXCHANGE ACT OF 1934  
(Amendment No. )\***

**Bellerophon Therapeutics, Inc.**

(Name of Issuer)

**Common Stock, \$0.01 par value  
(Title of Class of Securities)**

**078771102  
(CUSIP Number)**

**December 31, 2015  
(Date of Event Which Requires Filing of This Statement)**

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d-1(b)

Rule 13d-1(c)

Rule 13d-1(d)

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

---

|  |  |
|--|--|
| 1.   | Name of Reporting Persons<br>Venrock Associates IV, L.P.   |
| 2.   | Check the Appropriate Box if a Member of a Group (See Instructions)<br>(a) <input checked="" type="checkbox"/> <sup>1</sup> (b) <input type="checkbox"/> |
| 3.   | SEC USE ONLY   |
| 4.   | Citizenship or Place of Organization<br>Delaware   |
| Number of Shares Beneficially Owned by Each Reporting Person With: | 5. Sole Voting Power<br>0  |
|  | 6. Shared Voting Power<br>962,415 <sup>2</sup>   |
|  | 7. Sole Dispositive Power<br>0   |
|  | 8. Shared Dispositive Power<br>962,415 <sup>2</sup>  |
| 9.   | Aggregate Amount Beneficially Owned by Each Reporting Person<br>962,415 <sup>2</sup>   |
| 10.  | Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>   |
| 11.  | Percent of Class Represented by Amount in Row (9)<br>7.3% <sup>3</sup>   |
| 12.  | Type of Reporting Person (See Instructions)<br>PN  |

<sup>1</sup> Venrock Associates IV, L.P. ("VA4"), Venrock Partners, L.P. ("VP"), Venrock Entrepreneurs Fund IV, L.P. ("VEF4"), Venrock Management IV, LLC (the general partner of VA4), Venrock Partners Management, LLC (the general partner of VP) and VEF Management IV, LLC (the general partner of VEF4) are members of a group for purposes of this Schedule 13G.

<sup>2</sup> Consists of 783,407 shares of common stock owned by VA4, 159,761 shares of common stock owned by VP and 19,247 shares of common stock owned by VEF4.

<sup>3</sup> This percentage is calculated based upon 13,099,864 shares of the Issuer's common stock outstanding as of November 9, 2015, as set forth in the Issuer's quarterly report on Form 10-Q filed with the Securities and Exchange Commission on November 12, 2015.

|  |  |  |
|--|--|--|
| 1.   | Name of Reporting Persons<br>Venrock Partners, L.P.  |  |
| 2.   | Check the Appropriate Box if a Member of a Group (See Instructions)<br>(a) <input checked="" type="checkbox"/> <sup>1</sup> (b) <input type="checkbox"/> |  |
| 3.   | SEC USE ONLY   |  |
| 4.   | Citizenship or Place of Organization<br>Delaware   |  |
| Number of Shares Beneficially Owned by Each Reporting Person With: | 5.   | Sole Voting Power<br>0                           |
|  | 6.   | Shared Voting Power<br>962,415 <sup>2</sup>      |
|  | 7.   | Sole Dispositive Power<br>0                      |
|  | 8.   | Shared Dispositive Power<br>962,415 <sup>2</sup> |
| 9.   | Aggregate Amount Beneficially Owned by Each Reporting Person<br>962,415 <sup>2</sup>   |  |
| 10.  | Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>   |  |
| 11.  | Percent of Class Represented by Amount in Row (9)<br>7.3% <sup>3</sup>   |  |
| 12.  | Type of Reporting Person (See Instructions)<br>PN  |  |

<sup>1</sup> Venrock Associates IV, L.P. (“VA4”), Venrock Partners, L.P. (“VP”), Venrock Entrepreneurs Fund IV, L.P. (“VEF4”), Venrock Management IV, LLC (the general partner of VA4), Venrock Partners Management, LLC (the general partner of VP) and VEF Management IV, LLC (the general partner of VEF4) are members of a group for purposes of this Schedule 13G.

<sup>2</sup> Consists of 783,407 shares of common stock owned by VA4, 159,761 shares of common stock owned by VP and 19,247 shares of common stock owned by VEF4.

<sup>3</sup> This percentage is calculated based upon 13,099,864 shares of the Issuer’s common stock outstanding as of November 9, 2015, as set forth in the Issuer’s quarterly report on Form 10-Q filed with the Securities and Exchange Commission on November 12, 2015.

|  |  |
|--|--|
| 1.   | Name of Reporting Persons<br>Venrock Entrepreneurs Fund IV, L.P.   |
| 2.   | Check the Appropriate Box if a Member of a Group (See Instructions)<br>(a) <input checked="" type="checkbox"/> <sup>1</sup> (b) <input type="checkbox"/> |
| 3.   | SEC USE ONLY   |
| 4.   | Citizenship or Place of Organization<br>Delaware   |
| Number of Shares Beneficially Owned by Each Reporting Person With: | 5. Sole Voting Power<br>0  |
|  | 6. Shared Voting Power<br>962,415 <sup>2</sup>   |
|  | 7. Sole Dispositive Power<br>0   |
|  | 8. Shared Dispositive Power<br>962,415 <sup>2</sup>  |
| 9.   | Aggregate Amount Beneficially Owned by Each Reporting Person<br>962,415 <sup>2</sup>   |
| 10.  | Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>   |
| 11.  | Percent of Class Represented by Amount in Row (9)<br>7.3% <sup>3</sup>   |
| 12.  | Type of Reporting Person (See Instructions)<br>PN  |

<sup>1</sup> Venrock Associates IV, L.P. (“VA4”), Venrock Partners, L.P. (“VP”), Venrock Entrepreneurs Fund IV, L.P. (“VEF4”), Venrock Management IV, LLC (the general partner of VA4), Venrock Partners Management, LLC (the general partner of VP) and VEF Management IV, LLC (the general partner of VEF4) are members of a group for purposes of this Schedule 13G.

<sup>2</sup> Consists of 783,407 shares of common stock owned by VA4, 159,761 shares of common stock owned by VP and 19,247 shares of common stock owned by VEF4.

<sup>3</sup> This percentage is calculated based upon 13,099,864 shares of the Issuer’s common stock outstanding as of November 9, 2015, as set forth in the Issuer’s quarterly report on Form 10-Q filed with the Securities and Exchange Commission on November 12, 2015.

|  |  |  |
|--|--|--|
| 1.   | Name of Reporting Persons<br>Venrock Management IV, LLC  |  |
| 2.   | Check the Appropriate Box if a Member of a Group (See Instructions)<br>(a) <input checked="" type="checkbox"/> <sup>1</sup> (b) <input type="checkbox"/> |  |
| 3.   | SEC USE ONLY   |  |
| 4.   | Citizenship or Place of Organization<br>Delaware   |  |
| Number of Shares Beneficially Owned by Each Reporting Person With: | 5.   | Sole Voting Power<br>0                           |
|  | 6.   | Shared Voting Power<br>962,415 <sup>2</sup>      |
|  | 7.   | Sole Dispositive Power<br>0                      |
|  | 8.   | Shared Dispositive Power<br>962,415 <sup>2</sup> |
| 9.   | Aggregate Amount Beneficially Owned by Each Reporting Person<br>962,415 <sup>2</sup>   |  |
| 10.  | Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>   |  |
| 11.  | Percent of Class Represented by Amount in Row (9)<br>7.3% <sup>3</sup>   |  |
| 12.  | Type of Reporting Person (See Instructions)<br>OO  |  |

<sup>1</sup> Venrock Associates IV, L.P. (“VA4”), Venrock Partners, L.P. (“VP”), Venrock Entrepreneurs Fund IV, L.P. (“VEF4”), Venrock Management IV, LLC (the general partner of VA4), Venrock Partners Management, LLC (the general partner of VP) and VEF Management IV, LLC (the general partner of VEF4) are members of a group for purposes of this Schedule 13G.

<sup>2</sup> Consists of 783,407 shares of common stock owned by VA4, 159,761 shares of common stock owned by VP and 19,247 shares of common stock owned by VEF4.

<sup>3</sup> This percentage is calculated based upon 13,099,864 shares of the Issuer’s common stock outstanding as of November 9, 2015, as set forth in the Issuer’s quarterly report on Form 10-Q filed with the Securities and Exchange Commission on November 12, 2015.

|  |  |  |
|--|--|--|
| 1.   | Name of Reporting Persons<br>Venrock Partners Management, LLC  |  |
| 2.   | Check the Appropriate Box if a Member of a Group (See Instructions)<br>(a) <input checked="" type="checkbox"/> <sup>1</sup> (b) <input type="checkbox"/> |  |
| 3.   | SEC USE ONLY   |  |
| 4.   | Citizenship or Place of Organization<br>Delaware   |  |
| Number of Shares Beneficially Owned by Each Reporting Person With: | 5.   | Sole Voting Power<br>0                           |
|  | 6.   | Shared Voting Power<br>962,415 <sup>2</sup>      |
|  | 7.   | Sole Dispositive Power<br>0                      |
|  | 8.   | Shared Dispositive Power<br>962,415 <sup>2</sup> |
| 9.   | Aggregate Amount Beneficially Owned by Each Reporting Person<br>962,415 <sup>2</sup>   |  |
| 10.  | Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>   |  |
| 11.  | Percent of Class Represented by Amount in Row (9)<br>7.3% <sup>3</sup>   |  |
| 12.  | Type of Reporting Person (See Instructions)<br>OO  |  |

<sup>1</sup> Venrock Associates IV, L.P. (“VA4”), Venrock Partners, L.P. (“VP”), Venrock Entrepreneurs Fund IV, L.P. (“VEF4”), Venrock Management IV, LLC (the general partner of VA4), Venrock Partners Management, LLC (the general partner of VP) and VEF Management IV, LLC (the general partner of VEF4) are members of a group for purposes of this Schedule 13G.

<sup>2</sup> Consists of 783,407 shares of common stock owned by VA4, 159,761 shares of common stock owned by VP and 19,247 shares of common stock owned by VEF4.

<sup>3</sup> This percentage is calculated based upon 13,099,864 shares of the Issuer’s common stock outstanding as of November 9, 2015, as set forth in the Issuer’s quarterly report on Form 10-Q filed with the Securities and Exchange Commission on November 12, 2015.

|  |  |  |
|--|--|--|
| 1.   | Name of Reporting Persons<br>VEF Management IV, LLC  |  |
| 2.   | Check the Appropriate Box if a Member of a Group (See Instructions)<br>(a) <input checked="" type="checkbox"/> <sup>1</sup> (b) <input type="checkbox"/> |  |
| 3.   | SEC USE ONLY   |  |
| 4.   | Citizenship or Place of Organization<br>Delaware   |  |
| Number of Shares Beneficially Owned by Each Reporting Person With: | 5.   | Sole Voting Power<br>0                           |
|  | 6.   | Shared Voting Power<br>962,415 <sup>2</sup>      |
|  | 7.   | Sole Dispositive Power<br>0                      |
|  | 8.   | Shared Dispositive Power<br>962,415 <sup>2</sup> |
| 9.   | Aggregate Amount Beneficially Owned by Each Reporting Person<br>962,415 <sup>2</sup>   |  |
| 10.  | Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>   |  |
| 11.  | Percent of Class Represented by Amount in Row (9)<br>7.3% <sup>3</sup>   |  |
| 12.  | Type of Reporting Person (See Instructions)<br>OO  |  |

<sup>1</sup> Venrock Associates IV, L.P. ("VA4"), Venrock Partners, L.P. ("VP"), Venrock Entrepreneurs Fund IV, L.P. ("VEF4"), Venrock Management IV, LLC (the general partner of VA4), Venrock Partners Management, LLC (the general partner of VP) and VEF Management IV, LLC (the general partner of VEF4) are members of a group for purposes of this Schedule 13G.

<sup>2</sup> Consists of 783,407 shares of common stock owned by VA4, 159,761 shares of common stock owned by VP and 19,247 shares of common stock owned by VEF4.

<sup>3</sup> This percentage is calculated based upon 13,099,864 shares of the Issuer's common stock outstanding as of November 9, 2015, as set forth in the Issuer's quarterly report on Form 10-Q filed with the Securities and Exchange Commission on November 12, 2015.

Introductory Note: This Statement on Schedule 13G is filed on behalf of Venrock Associates IV, L.P., a limited partnership organized under the laws of the State of Delaware (“VA4”), Venrock Partners, L.P., a limited partnership organized under the laws of the State of Delaware (“VP”), Venrock Entrepreneurs Fund IV, L.P., a limited partnership organized under the laws of the State of Delaware (“VEF4”), Venrock Management IV, LLC, a limited liability company organized under the laws of the State of Delaware (“Venrock Management”), Venrock Partners Management, LLC, a limited liability company organized under the laws of the State of Delaware (“VP Management”), and VEF Management IV, LLC, a limited liability company organized under the laws of the State of Delaware (“VEF Management” and collectively with VA4, VP, VEF4, Venrock Management and VP Management, the “Venrock Entities”) in respect of shares of common stock of Bellerophon Therapeutics, Inc.

**Item 1.**

- (a) Name of Issuer  
Bellerophon Therapeutics, Inc.
- (b) Address of Issuer’s Principal Executive Offices  
184 Liberty Corner Road, Suite 302  
Warren, NJ 07059

**Item 2.**

- (a) Name of Person Filing  
Venrock Associates IV, L.P.  
Venrock Partners, L.P.  
Venrock Entrepreneurs Fund IV, L.P.  
Venrock Management IV, LLC  
Venrock Partners Management, LLC  
VEF Management IV, LLC
- (b) Address of Principal Business Office or, if none, Residence

New York Office:  
530 Fifth Avenue  
22nd Floor  
New York, NY 10036

Palo Alto Office:  
3340 Hillview Avenue  
Palo Alto, CA 94304

Boston Office:  
470 Atlantic Avenue  
4th Floor  
Boston, MA 02210

- (c) Citizenship

Each of VA4, VP and VEF4 are limited partnerships organized in the State of Delaware. Each of Venrock Management, VP Management and VEF Management are limited liability companies organized in the State of Delaware.

---



- (d) Title of Class of Securities  
Common Stock, \$0.01 par value
- (e) CUSIP Number  
078771102

**Item 3. If this statement is filed pursuant to §§240.13d-1(b), or 240.13d-2(b) or (c), check whether the person filing is a:**

Not applicable

**Item 4. Ownership**

(a) Amount Beneficially Owned as of December 31, 2015:

|                                     |             |
|-------------------------------------|-------------|
| Venrock Associates IV, L.P.         | 962,415 (1) |
| Venrock Partners, L.P.              | 962,415 (1) |
| Venrock Entrepreneurs Fund IV, L.P. | 962,415 (1) |
| Venrock Management IV, LLC          | 962,415 (1) |
| Venrock Partners Management, LLC    | 962,415 (1) |
| VEF Management IV, LLC              | 962,415 (1) |

(b) Percent of Class as of December 31, 2015:

|                                     |          |
|-------------------------------------|----------|
| Venrock Associates IV, L.P.         | 7.3% (2) |
| Venrock Partners, L.P.              | 7.3% (2) |
| Venrock Entrepreneurs Fund IV, L.P. | 7.3% (2) |
| Venrock Management IV, LLC          | 7.3% (2) |
| Venrock Partners Management, LLC    | 7.3% (2) |
| VEF Management IV, LLC              | 7.3% (2) |

(c) Number of shares as to which the person has, as of December 31, 2015:

(i) Sole power to vote or to direct the vote

|                                     |   |
|-------------------------------------|---|
| Venrock Associates IV, L.P.         | 0 |
| Venrock Partners, L.P.              | 0 |
| Venrock Entrepreneurs Fund IV, L.P. | 0 |
| Venrock Management IV, LLC          | 0 |
| Venrock Partners Management, LLC    | 0 |
| VEF Management IV, LLC              | 0 |

---

(ii) Shared power to vote or to direct the vote

|                                     |             |
|-------------------------------------|-------------|
| Venrock Associates IV, L.P.         | 962,415 (1) |
| Venrock Partners, L.P.              | 962,415 (1) |
| Venrock Entrepreneurs Fund IV, L.P. | 962,415 (1) |
| Venrock Management IV, LLC          | 962,415 (1) |
| Venrock Partners Management, LLC    | 962,415 (1) |
| VEF Management IV, LLC              | 962,415 (1) |

(V) Sole power to dispose or to direct the disposition of

|                                     |   |
|-------------------------------------|---|
| Venrock Associates IV, L.P.         | 0 |
| Venrock Partners, L.P.              | 0 |
| Venrock Entrepreneurs Fund IV, L.P. | 0 |
| Venrock Management IV, LLC          | 0 |
| Venrock Partners Management, LLC    | 0 |
| VEF Management IV, LLC              | 0 |

(iv) Shared power to dispose or to direct the disposition of

|                                     |             |
|-------------------------------------|-------------|
| Venrock Associates IV, L.P.         | 962,415 (1) |
| Venrock Partners, L.P.              | 962,415 (1) |
| Venrock Entrepreneurs Fund IV, L.P. | 962,415 (1) |
| Venrock Management IV, LLC          | 962,415 (1) |
| Venrock Partners Management, LLC    | 962,415 (1) |
| VEF Management IV, LLC              | 962,415 (1) |

- (1) These shares are owned directly as follows: 783,407 shares are owned by VA4, 159,761 shares are owned by VP and 19,247 shares are owned by VEF4.  
(2) This percentage is calculated based upon 13,099,864 shares of the Issuer's common stock outstanding as of November 9, 2015, as set forth in the Issuer's quarterly report on Form 10-Q filed with the Securities and Exchange Commission on November 12, 2015.

**Item 5. Ownership of Five Percent or Less of a Class**

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following.

**Item 6. Ownership of More than Five Percent on Behalf of Another Person**

Not Applicable

---

**Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company or Control Person.**

Not Applicable

**Item 8. Identification and Classification of Members of the Group**

Not Applicable

**Item 9. Notice of Dissolution of a Group**

Not Applicable

**Item 10. Certification**

Not Applicable

---

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this Statement is true, complete and correct.

Dated: February 16, 2016

**Venrock Associates IV, L.P.**

By: Venrock Management IV, LLC  
Its: General Partner

By: /s/ David Stepp  
Authorized Signatory

**Venrock Partners, L.P.**

By: Venrock Partners Management, LLC  
Its: General Partner

By: /s/ David Stepp  
Authorized Signatory

**Venrock Entrepreneurs Fund IV, L.P.**

By: VEF Management IV, LLC  
Its: General Partner

By: /s/ David Stepp  
Authorized Signatory

**Venrock Management IV, LLC**

By: /s/ David Stepp  
Authorized Signatory

**Venrock Partners Management, LLC**

By: /s/ David Stepp  
Authorized Signatory

**VEF Management IV, LLC**

By: /s/ David Stepp  
Authorized Signatory

---

**EXHIBIT A**

JOINT FILING AGREEMENT

In accordance with Rule 13d-1(k) under the Securities Exchange Act of 1934, as amended, the undersigned agree to the joint filing on behalf of each of them of a statement on Schedule 13G (including amendments thereto) with respect to the Common Stock of Bellerophon Therapeutics, Inc. and further agree that this agreement be included as an exhibit to such filing. Each party to the agreement expressly authorizes each other party to file on its behalf any and all amendments to such statement. Each party to this agreement agrees that this joint filing agreement may be signed in counterparts.

In evidence whereof, the undersigned have caused this Agreement to be executed on their behalf this 16th day of February, 2016.

**Venrock Associates IV, L.P.**

By: Venrock Management IV, LLC  
Its: General Partner

By: /s/ David Stepp  
Authorized Signatory

**Venrock Partners, L.P.**

By: Venrock Partners Management, LLC  
Its: General Partner

By: /s/ David Stepp  
Authorized Signatory

**Venrock Entrepreneurs Fund IV, L.P.**

By: VEF Management IV, LLC  
Its: General Partner

By: /s/ David Stepp  
Authorized Signatory

**Venrock Management IV, LLC**

By: /s/ David Stepp  
Authorized Signatory

**Venrock Partners Management, LLC**

By: /s/ David Stepp  
Authorized Signatory

**VEF Management IV, LLC**

By: /s/ David Stepp  
Authorized Signatory

---

**EXHIBITS**

A: Joint Filing Agreement