

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D
(Rule 13d-101)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT
TO § 240.13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO
§ 240.13d-2(a)

(Amendment No. 4)¹

CTI BioPharma Corp.
(Name of Issuer)

Common Stock, \$0.001 par value
(Title of Class of Securities)

12648L601
(CUSIP Number)

JAMES KRATKY
BVF PARTNERS L.P.
1 Sansome Street, 30th Floor
San Francisco, California 94104
(415) 525-8830

ADAM W. FINERMAN, ESQ.
OLSHAN FROME WOLOSKY LLP
1325 Avenue of the Americas
New York, New York 1001
(212) 451-2300
(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

February 8, 2018
(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box ☒.

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See § 240.13d-7 for other parties to whom copies are to be sent.

¹ 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 disclosures provided in a prior cover page.

The information required on 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 PERSON BIOTECHNOLOGY VALUE FUND, L.P. | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/> | |
| 3 | SEC USE ONLY | |
| 4 | SOURCE OF FUNDS WC | |
| 5 | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/> | |
| 6 | CITIZENSHIP OR PLACE OF ORGANIZATION DELAWARE | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7 | SOLE VOTING POWER - 0 - |
| | 8 | SHARED VOTING POWER 6,795,120(1) |
| | 9 | SOLE DISPOSITIVE POWER - 0 - |
| | 10 | SHARED DISPOSITIVE POWER 6,795,120(1) |
| 11 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 6,795,120(1) | |
| 12 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/> | |
| 13 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 10.7%(1) | |
| 14 | TYPE OF REPORTING PERSON PN | |

(1) Includes 3,754,000 shares of Common Stock underlying 5,631 shares of Series O Preferred Stock convertible within 60 days hereof, subject to the Beneficial Ownership Limitation (as defined below).

| | | |
|---|---|--|
| 1 | NAME OF REPORTING PERSON BIOTECHNOLOGY VALUE FUND II, L.P. | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/> | |
| 3 | SEC USE ONLY | |
| 4 | SOURCE OF FUNDS WC | |
| 5 | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/> | |
| 6 | CITIZENSHIP OR PLACE OF ORGANIZATION DELAWARE | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7 | SOLE VOTING POWER - 0 - |
| | 8 | SHARED VOTING POWER 4,179,486(1) |
| | 9 | SOLE DISPOSITIVE POWER - 0 - |
| | 10 | SHARED DISPOSITIVE POWER 4,179,486(1) |
| 11 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,179,486(1) | |
| 12 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/> | |
| 13 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 6.6%(1) | |
| 14 | TYPE OF REPORTING PERSON PN | |

(1) Includes 2,070,206 shares of Common Stock underlying 3,105 shares of Series O Preferred Stock convertible within 60 days hereof. Excludes 356,461 shares of Common Stock underlying 535 shares of Series O Preferred Stock, which may not be converted due to the Beneficial Ownership Limitation (as defined below).

| | | |
|---|--|--|
| 1 | NAME OF REPORTING PERSON BIOTECHNOLOGY VALUE TRADING FUND OS LP | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/> | |
| 3 | SEC USE ONLY | |
| 4 | SOURCE OF FUNDS WC | |
| 5 | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/> | |
| 6 | CITIZENSHIP OR PLACE OF ORGANIZATION CAYMAN ISLANDS | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7 | SOLE VOTING POWER - 0 - |
| | 8 | SHARED VOTING POWER 483,708(1) |
| | 9 | SOLE DISPOSITIVE POWER - 0 - |
| | 10 | SHARED DISPOSITIVE POWER 483,708(1) |
| 11 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 483,708(1) | |
| 12 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/> | |
| 13 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) Less than 1% (1) | |
| 14 | TYPE OF REPORTING PERSON PN | |

(1) Excludes 682,666 shares of Common Stock underlying 1,024 shares of Series O Preferred Stock, which may not be converted due to the Beneficial Ownership Limitation (as defined below).

| | | |
|---|--|--|
| 1 | NAME OF REPORTING PERSON BVF PARTNERS OS LTD. | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/> | |
| 3 | SEC USE ONLY | |
| 4 | SOURCE OF FUNDS AF | |
| 5 | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/> | |
| 6 | CITIZENSHIP OR PLACE OF ORGANIZATION CAYMAN ISLANDS | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7 | SOLE VOTING POWER - 0 - |
| | 8 | SHARED VOTING POWER 483,708(1) |
| | 9 | SOLE DISPOSITIVE POWER - 0 - |
| | 10 | SHARED DISPOSITIVE POWER 483,708(1) |
| 11 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 483,708(1) | |
| 12 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/> | |
| 13 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) Less than 1% (1) | |
| 14 | TYPE OF REPORTING PERSON CO | |

(1) Excludes 682,666 shares of Common Stock underlying 1,024 shares of Series O Preferred Stock, which may not be converted due to the Beneficial Ownership Limitation (as defined below).

| | | |
|---|--|---|
| 1 | NAME OF REPORTING PERSON BVF PARTNERS L.P. | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/> | |
| 3 | SEC USE ONLY | |
| 4 | SOURCE OF FUNDS AF | |
| 5 | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/> | |
| 6 | CITIZENSHIP OR PLACE OF ORGANIZATION DELAWARE | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7 | SOLE VOTING POWER - 0 - |
| | 8 | SHARED VOTING POWER 12,753,896(1) |
| | 9 | SOLE DISPOSITIVE POWER - 0 - |
| | 10 | SHARED DISPOSITIVE POWER 12,753,896(1) |
| 11 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 12,753,896(1) | |
| 12 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/> | |
| 13 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 19.99%(1) | |
| 14 | TYPE OF REPORTING PERSON PN, IA | |

(1) Includes 5,824,206 shares of Common Stock underlying 8,736 shares of Series O Preferred Stock convertible within 60 days hereof. Excludes 2,559,127 of Common Stock underlying 3,839 shares of Series O Preferred Stock, which may not be converted due to the Beneficial Ownership Limitation (as defined below).

| | | |
|---|--|---|
| 1 | NAME OF REPORTING PERSON BVF INC. | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/> | |
| 3 | SEC USE ONLY | |
| 4 | SOURCE OF FUNDS AF | |
| 5 | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/> | |
| 6 | CITIZENSHIP OR PLACE OF ORGANIZATION DELAWARE | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7 | SOLE VOTING POWER - 0 - |
| | 8 | SHARED VOTING POWER 12,753,896(1) |
| | 9 | SOLE DISPOSITIVE POWER - 0 - |
| | 10 | SHARED DISPOSITIVE POWER 12,753,896(1) |
| 11 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 12,753,896(1) | |
| 12 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/> | |
| 13 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 19.99%(1) | |
| 14 | TYPE OF REPORTING PERSON CO | |

(1) Includes 5,824,206 shares of Common Stock underlying 8,736 shares of Series O Preferred Stock convertible within 60 days hereof. Excludes 2,559,127 of Common Stock underlying 3,839 shares of Series O Preferred Stock, which may not be converted due to the Beneficial Ownership Limitation (as defined below).

| | | |
|---|--|---|
| 1 | NAME OF REPORTING PERSON MARK N. LAMPERT | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/> | |
| 3 | SEC USE ONLY | |
| 4 | SOURCE OF FUNDS AF | |
| 5 | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/> | |
| 6 | CITIZENSHIP OR PLACE OF ORGANIZATION USA | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7 | SOLE VOTING POWER - 0 - |
| | 8 | SHARED VOTING POWER 12,753,896(1) |
| | 9 | SOLE DISPOSITIVE POWER - 0 - |
| | 10 | SHARED DISPOSITIVE POWER 12,753,896(1) |
| 11 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 12,753,896(1) | |
| 12 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/> | |
| 13 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 19.99%(1) | |
| 14 | TYPE OF REPORTING PERSON IN | |

(1) Includes 5,824,206 shares of Common Stock underlying 8,736 shares of Series O Preferred Stock convertible within 60 days hereof. Excludes 2,559,127 of Common Stock underlying 3,839 shares of Series O Preferred Stock, which may not be converted due to the Beneficial Ownership Limitation (as defined below).

| | | |
|---|--|---------------------------------------|
| 1 | NAME OF REPORTING PERSON MATTHEW D. PERRY | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/> | |
| 3 | SEC USE ONLY | |
| 4 | SOURCE OF FUNDS | |
| 5 | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/> | |
| 6 | CITIZENSHIP OR PLACE OF ORGANIZATION USA | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7 | SOLE VOTING POWER 43,139 |
| | 8 | SHARED VOTING POWER - 0 - |
| | 9 | SOLE DISPOSITIVE POWER 43,139 |
| | 10 | SHARED DISPOSITIVE POWER - 0 - |
| 11 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 43,139 | |
| 12 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/> | |
| 13 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) Less than 1% | |
| 14 | TYPE OF REPORTING PERSON IN | |

The following constitutes Amendment No. 4 to the Schedule 13D filed by the undersigned ("Amendment No. 4"). This Amendment No. 4 amends the Schedule 13D as specifically set forth herein.

Item 3. Source and Amount of Funds or Other Consideration.

Item 3 is hereby amended and restated to read as follows:

The shares of Common Stock purchased by each of BVF, BVF2, Trading Fund OS, and held in the Partners Managed Accounts, were purchased with working capital (which may, at any given time, include margin loans made by brokerage firms in the ordinary course of business) in open market purchases, except as otherwise noted on Schedule A.

The aggregate purchase price of the 3,041,120 shares of Common Stock beneficially owned by BVF is approximately \$9,123,360, including brokerage commissions. The aggregate purchase price of the 2,109,280 shares of Common Stock beneficially owned by BVF2 is approximately \$6,327,840, including brokerage commissions. The aggregate purchase price of the 483,708 shares of Common Stock beneficially owned by Trading Fund OS is approximately \$1,451,124, including brokerage commissions. The aggregate purchase price of the 1,295,582 shares of Common Stock beneficially owned by the Partners Managed Accounts is approximately \$15,217,542, including brokerage commissions.

The 12,575 shares of Series O Preferred Stock, par value \$0.001 per share (the "Series O Preferred Stock") were received in connection with the Exchange Agreement (defined below) for no consideration.

The 43,139 shares of Common Stock beneficially owned by Mr. Perry were granted to Mr. Perry by the Issuer in his capacity as a director of the Issuer.

Item 5. Interest in Securities of the Issuer.

Items 5(a) – (c) are hereby amended and restated to read as follows:

(a) The aggregate percentage of shares of Common Stock reported owned by each person named herein is based on a denominator that is the sum of: (i) 57,977,176 shares of Common Stock outstanding based on the Issuer's Prospectuses filed on February 5, 2018 and February 9, 2018 and (ii) certain or all of the 5,824,206 shares of Common Stock issued upon the conversion of certain shares of Series O Preferred Stock.

As of the date hereof, the Reporting Persons hold 12,575 shares of Series O Preferred Stock, convertible into an aggregate of 8,383,333 shares of Common Stock. The conversion ratio is 667 shares of Common Stock for 1 share of Series O Preferred Stock. The Series O Preferred Stock may not be converted if, after such conversion, the Reporting Persons would beneficially own, as determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended, more than 19.99% of the shares of Common Stock outstanding immediately after giving effect to such conversion (the "Beneficial Ownership Limitation"). The Reporting Persons, in the aggregate, will reach the Beneficial Ownership Limitation, upon the conversion of 8,736 shares of Series O Preferred Stock representing 5,824,206 shares of Common Stock. As such, 3,839 shares of Series O Preferred Stock representing 2,559,127 shares of Common Stock are blocked from being converted pursuant to the Beneficial Ownership Limitation.

As of the date hereof, (i) BVF beneficially owned 6,795,120 Shares, including approximately 3,754,000 shares of Common Stock issuable upon the conversion of 5,631 shares of Series O Preferred Stock, representing percentage ownership of approximately 10.7% of the shares of Common Stock outstanding, (ii) BVF2 beneficially owned 4,179,486 shares of Common Stock, including approximately 2,070,206 shares of Common Stock issuable upon the conversion of 3,105 shares of Series O Preferred Stock and excluding 356,461 shares of Common Stock issuable upon the conversion of 535 shares of Series O Preferred Stock, representing percentage ownership of approximately 6.6% of the shares of Common Stock outstanding, (iii) Trading Fund OS beneficially owned 483,708 shares of Common Stock, excluding 682,666 shares of Common Stock issuable upon the conversion of 1,024 shares of Series O Preferred Stock, representing percentage ownership of less than 1% of the shares of Common Stock outstanding and (iv) 1,295,582 shares of Common Stock were held in the Partners Managed Accounts, excluding 1,520,000 shares of Common Stock issuable upon the conversion of 2,280 shares Series O Preferred Stock, representing percentage ownership of approximately 2.0% of the shares of Common Stock outstanding.

Partners OS, as the general partner of Trading Fund OS, may be deemed to beneficially own the 483,708 shares of Common Stock beneficially owned by Trading Fund OS, representing percentage ownership of less than 1% of the shares of Common Stock outstanding.

Partners, as the general partner of BVF, BVF2, the sole member of Partners OS and the investment manager of Trading Fund OS and the Partners Managed Accounts, may be deemed to beneficially own the 12,753,896 Shares of Common Stock beneficially owned in the aggregate by BVF, BVF2, Trading Fund OS, and held in the Partners Managed Accounts, representing percentage ownership of approximately 19.99% of the shares of Common Stock outstanding.

BVF Inc., as the general partner of Partners, may be deemed to beneficially own the 12,753,896 Shares beneficially owned by Partners, representing percentage ownership of approximately 19.99% of the Shares outstanding.

Mr. Lampert, as a director and officer of BVF Inc. may be deemed to beneficially own the 12,753,896 Shares beneficially owned by BVF Inc., representing percentage ownership of approximately 19.99% of the shares of Common Stock outstanding.

As of the date hereof, Mr. Perry directly owns 43,139 Shares, representing percentage ownership of less than 1% of the shares of Common Stock outstanding.

(b) Each of BVF, BVF2 and Trading Fund OS shares with Partners voting and dispositive power over the shares of Common Stock each such entity beneficially owns. Trading Fund OS shares with Partners OS, voting and dispositive power over the shares of Common Stock beneficially owned by Trading Fund OS. Partners, BVF Inc. and Mr. Lampert share voting and dispositive power over the 12,753,896 shares of Common Stock they may be deemed to beneficially own with BVF, BVF2, Trading Fund OS and Partners OS.

(c) Schedule A annexed hereto lists all transactions in Securities of the Issuer by the Reporting Persons during the past 60 days. All of such transactions were effected in the open market except as otherwise indicated.

Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer.

Item 6 is hereby amended to add the following:

On February 8, 2018, the Issuer entered into an exchange agreement with certain of the Reporting Persons (the “Exchange Agreement”) pursuant to which certain of the Reporting Persons agreed to exchange 8,000,000 shares of the Issuer’s Common Stock, and 575 shares of the Issuer’s Series N Preferred Stock, par value \$0.001 per share (the “Series N Preferred Stock”), that it owns into an aggregate of 12,575 shares of the Company’s Series O Preferred Stock. The conversion ratio is 667 shares of Common Stock for 1 share of Series O Preferred Stock. The Series N Preferred Stock were converted to Series O Preferred Stock at a ratio of 1:1. As discussed above, the Series O Preferred Stock are subject to the Beneficial Ownership Limitation.

On February 9, 2018, certain of the Reporting Persons in connection with a public offering by the Issuer purchased, in the aggregate, 6,333,333 shares of Common Stock, for a price of \$3.00 per share.

SIGNATURES

After reasonable inquiry and to the best of his knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

Dated: February 12, 2018

BIOTECHNOLOGY VALUE FUND, L.P.

By: BVF Partners L.P., its general partner
By: BVF Inc., its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
President

BVF INC.

/s/ Mark N. Lampert
By: Mark N. Lampert
President

/s/ Mark N. Lampert
MARK N. LAMPERT

BIOTECHNOLOGY VALUE FUND II, L.P.

By: BVF Partners L.P., its general partner
By: BVF Inc., its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
President

/s/ Matthew D. Perry
MATTHEW D. PERRY

BVF PARTNERS L.P.

By: BVF Inc., its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
President

BVF PARTNERS OS LTD.

By: BVF Partners L.P., its sole member
By: BVF Inc., its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
President

BIOTECHNOLOGY VALUE TRADING FUND OS LP

By: BVF Partners L.P., its investment manager
By: BVF Inc., its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
President

SCHEDULE A

Transactions in the Securities of the Issuer During the Past Sixty Days

| <u>Class of Security</u> | <u>Securities Purchased / (Sold)</u> | <u>Price (\$)</u> | <u>Date of Purchase / Sale</u> |
|---|--------------------------------------|-------------------|--------------------------------|
| <u>BIOTECHNOLOGY VALUE FUND, L.P.</u> | | | |
| Series O Preferred Stock | 5,631 ⁽¹⁾ | (1) | 02/09/2018 |
| Common Stock* | 3,041,120 | 3.00 | 02/09/2018 |
| <u>BIOTECHNOLOGY VALUE FUND II, L.P.</u> | | | |
| Series O Preferred Stock | 3,640 ⁽²⁾ | (2) | 02/09/2018 |
| Common Stock* | 2,109,280 | 3.00 | 02/09/2018 |
| <u>BIOTECHNOLOGY VALUE TRADING FUND OS LP</u> | | | |
| Series O Preferred Stock | 1,024 ⁽³⁾ | (3) | 02/09/2018 |
| Common Stock* | 483,708 | 3.00 | 02/09/2018 |
| <u>BVF PARTNERS L.P. (THROUGH THE PARTNERS MANAGED ACCOUNTS)</u> | | | |
| Series O Preferred Stock | 2,280 ⁽⁴⁾ | (4) | 02/09/2018 |
| Common Stock* | 699,225 | 3.00 | 02/09/2018 |

* Purchased in underwritten public offering.

(1) Received pursuant to the Exchange Agreement for 3,566,549 shares of Common Stock and 281 shares of Series N Preferred Stock.

(2) Received pursuant to the Exchange Agreement for 2,295,083 shares of Common Stock and 197 shares of Series N Preferred Stock.

(3) Received pursuant to the Exchange Agreement for 651,074 shares of Common Stock and 48 shares of Series N Preferred Stock.

(4) Received pursuant to the Exchange Agreement for 1,487,294 shares of Common Stock and 49 shares of Series N Preferred Stock.