

XOMA Corp  
Form SC 13D/A  
December 21, 2018

**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. 1)<sup>1</sup>

XOMA Corporation

(Name of Issuer)

Common Stock, \$0.0075 par value

(Title of Class of Securities)

98419J 206

(CUSIP Number)

JAMES KRATKY

BVF Partners L.P.

44 Montgomery St., 40th Floor

San Francisco, California 94104

(415) 525-8890

ADAM W. FINERMAN, ESQ.

OLSHAN FROME WOLOSKY LLP

1325 Avenue of the Americas

New York, New York 10019

(212) 451-2300

(Name, Address and Telephone Number of Person

Authorized to Receive Notices and Communications)

December 18, 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*).

CUSIP NO. 98419J 206

1 NAME OF REPORTING PERSON

BIOTECHNOLOGY VALUE FUND, L.P.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC  
CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

DELAWARE

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

7

SOLE VOTING POWER

- 0 -

OWNED BY EACH REPORTING PERSON WITH

8

SHARED VOTING POWER

694,961\*

PERSON WITH

9

SOLE DISPOSITIVE POWER

- 0 -

10

SHARED DISPOSITIVE POWER

694,961\*

11 AGGREGATE AMOUNT  
BENEFICIALLY OWNED BY  
EACH REPORTING PERSON

694,961\*

12 CHECK BOX IF THE  
AGGREGATE  
AMOUNT IN ROW  
(11) EXCLUDES  
CERTAIN SHARES

13 PERCENT OF CLASS  
REPRESENTED BY AMOUNT  
IN ROW (11)

8.0%\*

14 TYPE OF REPORTING  
PERSON

PN

\* Excludes Shares underlying Series X Convertible Preferred Stock and Series Y Convertible Preferred Stock as described below in Item 5.

CUSIP NO. 98419J 206

1	NAME OF REPORTING PERSON	
	BIOTECHNOLOGY VALUE FUND II, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP	(a)
		(b)
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)	
6	CITIZENSHIP OR PLACE OF ORGANIZATION	
	DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER
		- 0 -
OWNED BY EACH REPORTING PERSON WITH	8	SHARED VOTING POWER
		718,541*
PERSON WITH	9	SOLE DISPOSITIVE POWER
		- 0 -
	10	SHARED DISPOSITIVE POWER
		718,541*

11 AGGREGATE AMOUNT  
BENEFICIALLY OWNED BY  
EACH REPORTING PERSON

718,541\*

12 CHECK BOX IF THE  
AGGREGATE  
AMOUNT IN ROW  
(11) EXCLUDES  
CERTAIN SHARES

13 PERCENT OF CLASS  
REPRESENTED BY AMOUNT  
IN ROW (11)

8.3%\*

14 TYPE OF REPORTING  
PERSON

PN

\* Excludes Shares underlying Series X Convertible Preferred Stock and Series Y Convertible Preferred Stock as described below in Item 5.

CUSIP NO. 98419J 206

1	NAME OF REPORTING PERSON
	BIOTECHNOLOGY VALUE TRADING FUND OS, L.P.
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a)
	(b)
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)
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
	123,649*
	9
	SOLE DISPOSITIVE POWER
	- 0 -
	10
	SHARED DISPOSITIVE POWER

	123,649*
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
	123,649*
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)
	1.4%*
14	TYPE OF REPORTING PERSON
	PN

\* Excludes Shares underlying Series X Convertible Preferred Stock as described below in Item 5.



CUSIP NO. 98419J 206

1	NAME OF REPORTING PERSON
	BVF PARTNERS OS LTD.
2	CHECK THE APPROPRIATE BOX IF A MEMBER (a) OF A GROUP (b)
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)
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
	123,649*
9	SOLE DISPOSITIVE POWER
	- 0 -
10	SHARED DISPOSITIVE POWER

11 123,649\*  
AGGREGATE AMOUNT  
BENEFICIALLY OWNED BY  
EACH REPORTING PERSON

12 123,649\*  
CHECK BOX IF  
THE AGGREGATE  
AMOUNT IN ROW  
(11) EXCLUDES  
CERTAIN SHARES

13 PERCENT OF CLASS  
REPRESENTED BY  
AMOUNT IN ROW (11)

14 1.4%\*  
TYPE OF REPORTING  
PERSON

CO

\* Excludes Shares underlying Series X Convertible Preferred Stock as described below in Item 5.

CUSIP NO. 98419J 206

1	NAME OF REPORTING PERSON
	BVF PARTNERS L.P.
2	CHECK THE APPROPRIATE BOX IF A MEMBER (a) OF A GROUP (b)
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)
6	CITIZENSHIP OR PLACE OF ORGANIZATION
	DELAWARE
7	NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH
	SOLE VOTING POWER
	- 0 -
8	OWNED BY EACH REPORTING PERSON WITH
	SHARED VOTING POWER
	1,769,029*
9	PERSON WITH
	SOLE DISPOSITIVE POWER
	- 0 -
10	PERSON WITH
	SHARED DISPOSITIVE POWER
	1,769,029*

11 AGGREGATE AMOUNT  
BENEFICIALLY OWNED BY  
EACH REPORTING PERSON

1,769,029\*

12 CHECK BOX IF  
THE AGGREGATE  
AMOUNT IN ROW  
(11) EXCLUDES  
CERTAIN SHARES

13 PERCENT OF CLASS  
REPRESENTED BY AMOUNT  
IN ROW (11)

20.4%\*

14 TYPE OF REPORTING  
PERSON

PN, IA

\* Excludes Shares underlying Series X Convertible Preferred Stock and Series Y Convertible Preferred Stock as described below in Item 5.

CUSIP NO. 98419J 206

1	NAME OF REPORTING PERSON
	BVF INC.
2	CHECK THE APPROPRIATE BOX IF A MEMBER (a) OF A GROUP (b)
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)
6	CITIZENSHIP OR PLACE OF ORGANIZATION
	DELAWARE
7	NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH
	SOLE VOTING POWER
	- 0 -
8	OWNED BY EACH REPORTING PERSON WITH
	SHARED VOTING POWER
	1,769,029*
9	PERSON WITH
	SOLE DISPOSITIVE POWER
	- 0 -
10	PERSON WITH
	SHARED DISPOSITIVE POWER
	1,769,029*

11 AGGREGATE AMOUNT  
BENEFICIALLY OWNED BY  
EACH REPORTING PERSON

1,769,029\*

12 CHECK BOX IF  
THE AGGREGATE  
AMOUNT IN ROW  
(11) EXCLUDES  
CERTAIN SHARES

13 PERCENT OF CLASS  
REPRESENTED BY AMOUNT  
IN ROW (11)

20.4%\*

14 TYPE OF REPORTING  
PERSON

CO

\* Excludes Shares underlying Series X Convertible Preferred Stock and Series Y Convertible Preferred Stock as described below in Item 5.

CUSIP NO. 98419J 206

1	NAME OF REPORTING PERSON
	MARK N. LAMPERT
2	CHECK THE APPROPRIATE BOX IF A MEMBER (a) OF A GROUP (b)
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)
6	CITIZENSHIP OR PLACE OF ORGANIZATION
	USA
7	NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH
8	SOLE VOTING POWER
	- 0 -
9	SHARED VOTING POWER
	1,769,029*
10	SOLE DISPOSITIVE POWER
	- 0 -
	SHARED DISPOSITIVE POWER
	1,769,029*

11 AGGREGATE AMOUNT  
BENEFICIALLY OWNED BY  
EACH REPORTING PERSON

1,769,029\*

12 CHECK BOX IF  
THE AGGREGATE  
AMOUNT IN ROW  
(11) EXCLUDES  
CERTAIN SHARES

13 PERCENT OF CLASS  
REPRESENTED BY AMOUNT  
IN ROW (11)

20.4%\*

14 TYPE OF REPORTING  
PERSON

IN

\* Excludes Shares underlying Series X Convertible Preferred Stock and Series Y Convertible Preferred Stock as described below in Item 5.



CUSIP NO. 98419J 206

1	NAME OF REPORTING PERSON	
	MATTHEW D. PERRY	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP	(a)  (b)
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)	
6	CITIZENSHIP OR PLACE OF ORGANIZATION	
	USA	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER  27,021*  8 SHARED VOTING POWER  - 0 -  9 SOLE DISPOSITIVE POWER  27,021*  10 SHARED DISPOSITIVE POWER

- 0 -

11 AGGREGATE AMOUNT  
BENEFICIALLY OWNED  
BY EACH REPORTING  
PERSON

27,021\*

12 CHECK BOX IF  
THE AGGREGATE  
AMOUNT IN ROW  
(11) EXCLUDES  
CERTAIN SHARES

13 PERCENT OF CLASS  
REPRESENTED BY  
AMOUNT IN ROW (11)

14 Less than 1%\*  
TYPE OF REPORTING  
PERSON

IN

\* Includes 15,222 Shares issuable on the exercise of certain options that are currently exercisable.

CUSIP NO. 98419J 206

The following constitutes Amendment No. 1 to the Schedule 13D filed by the undersigned (the "Amendment No. 1"). This Amendment No. 1 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 purchased by BVF, BVF2 and Trading Fund OS 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. The aggregate purchase price of the 694,961 Shares owned directly by BVF is approximately \$2,990,337, including brokerage commissions. The aggregate purchase price of the 718,541 Shares owned directly by BVF2 is approximately \$5,782,012, including brokerage commissions. The aggregate purchase price of the 123,649 Shares owned directly by Trading Fund OS is approximately \$534,962, including brokerage commissions. The aggregate purchase price of the 231,878 Shares held in the Partners Managed Accounts is approximately \$1,005,667, including brokerage commissions.

The aggregate purchase price of the 2,313 shares of Series X Convertible Preferred Stock, par value \$0.05 per share (the "Series X Preferred Stock") owned directly by BVF is approximately \$9,321,390, including brokerage commissions. The aggregate purchase price of the 1,506 shares of Series X Preferred Stock owned directly by BVF2 is approximately \$6,069,180, including brokerage commissions. The aggregate purchase price of the 412 shares of Series X Preferred Stock owned directly by Trading Fund OS is approximately \$1,660,360, including brokerage commissions. The aggregate purchase price of the 772 shares of Series X Preferred Stock held in the Partners Managed Accounts is approximately \$3,111,160, including brokerage commissions.

The aggregate purchase price of the 655.959 shares of Series Y Convertible Preferred Stock, par value \$0.05 per share (the "Series Y Preferred Stock") owned directly by BVF is approximately \$8,527,467, including brokerage commissions. The aggregate purchase price of the 596.813 shares of Series Y Preferred Stock owned directly by BVF2 is approximately \$7,758,569, including brokerage commissions.

The Shares beneficially owned by Mr. Perry were awarded by the Issuer in connection with his service as a director.

Item 4. Purpose of Transaction.

Item 4 is hereby amended to add the following:

In connection with the Issuer's non-transferable rights offering (the "Rights Offering") announced on November 19, 2018, certain of the Reporting Persons entered into an investment agreement, dated November 6, 2018 with the Issuer (the "Investment Agreement"). The following description of the Investment Agreement is qualified in its entirety by reference to the Investment Agreement, which is attached as Exhibit 99.1 hereto and is incorporated herein by reference.

Pursuant to the Investment Agreement, the Reporting Persons agreed to purchase from the Issuer, subject to certain conditions, shares of Series Y Preferred Stock in an amount equal to the aggregate value of the Shares not subscribed for in the Rights Offering, at a price per Share equal to \$13,000 per share of Series Y Preferred Stock (the "Backstop Commitment"). The Investment Agreement contains customary representations, warranties and covenants by the parties.

On December 18, 2018, following the expiration of the Rights Offering and pursuant to the Backstop Commitment, BVF and BVF2 acquired 310.646 shares of Series Y Preferred Stock and 372 shares of Series Y Preferred Stock,

respectively. The Reporting Persons also acquired an aggregate of 570.126 shares of Series Y Preferred Stock following the exercise of their basic subscription rights in connection with the Rights Offering.

CUSIP NO. 98419J 206

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 reported owned by each person named herein is based on a denominator that is the sum of: (i) 8,395,289 Shares outstanding as of November 16, 2018, which is the total number of Shares outstanding as reported in the Issuer's Prospectus Supplement on Form 424B5 filed with the Securities and Exchange Commission on November 19, 2018, (ii) 285,689 Shares issued pursuant to the Rights Offering as reported in the Issuer's Current Report on Form 8-K filed with the Securities and Exchange Commission on December 18, 2018, and (iii) with respect to Mr. Perry, 15,222 Shares issuable on the exercise of certain options.

As of the date hereof, the Reporting Persons hold 5,003 shares of Series X Preferred Stock, convertible into an aggregate of 5,003,000 Shares. Each share of Series X Preferred Stock is convertible into 1,000 Shares. The Series X 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 outstanding immediately after giving effect to such conversion (the "Series X Beneficial Ownership Limitation"). As of the date hereof, the Series X Beneficial Ownership Limitation, limits the aggregate conversion of the Series X Preferred Stock by the Reporting Persons to zero out of the 5,003,000 Shares underlying the Series X Preferred Stock.

As of the date hereof, the Reporting Persons hold 1,252,772 shares of Series Y Preferred Stock, convertible into an aggregate of 1,252,772 Shares. Each share of Series Y Preferred Stock is convertible into 1,000 Shares based on a conversion price of \$13.00 per Share. The Series Y 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 outstanding immediately after giving effect to such conversion (the "Series Y Beneficial Ownership Limitation"). As of the date hereof, the Series Y Beneficial Ownership Limitation, limits the aggregate conversion of the Series Y Preferred Stock by the Reporting Persons to zero out of the 1,252,772 Shares underlying the Series Y Preferred Stock.

As of the date hereof, (i) BVF beneficially owned 694,961 Shares, excluding 2,313,000 Shares issuable upon the conversion of certain Series X Preferred Stock and 655,959 Shares issuable upon the conversion of certain Series Y Preferred Stock, representing percentage ownership of approximately 8.0% of the Shares outstanding, (ii) BVF2 beneficially owned 718,541 Shares, excluding 1,506,000 Shares issuable upon the conversion of certain Series X Preferred Stock and 596,813 Shares issuable upon the conversion of certain Series Y Preferred Stock, representing percentage ownership of approximately 8.3% of the Shares outstanding, (iii) Trading Fund OS beneficially owned 123,649 Shares, excluding 412,000 Shares issuable upon the conversion of certain Series X Preferred Stock, representing percentage ownership of approximately 1.4% of the Shares outstanding, and (iv) 231,878 Shares were held in the Partners Managed Accounts, excluding 772,000 Shares issuable upon the conversion of certain Series X Preferred Stock, representing percentage ownership of approximately 2.7% of the Shares outstanding.

CUSIP NO. 98419J 206

Partners OS, as the general partner of Trading Fund OS, may be deemed to beneficially own the 123,649 Shares, excluding 412,000 Shares issuable upon the conversion of certain Series X Preferred Stock, beneficially owned by Trading Fund OS, representing percentage ownership of approximately 1.4% of the Shares 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 1,769,029 Shares beneficially owned in the aggregate by BVF, BVF2, Trading Fund OS, and held in the Partners Managed Accounts, excluding 5,003,000 Shares issuable upon the conversion of the Series X Preferred Stock and 1,252,772 Shares issuable upon the conversion of the Series Y Preferred Stock, representing percentage ownership of approximately 20.4% of the Shares outstanding.

BVF Inc., as the general partner of Partners, may be deemed to beneficially own the 1,769,029 Shares beneficially owned by Partners, excluding 5,003,000 Shares issuable upon the conversion of the Series X Preferred Stock and 1,252,772 Shares issuable upon the conversion of the Series Y Preferred Stock, representing percentage ownership of approximately 20.4% of the Shares outstanding.

Mr. Lampert, as a director and officer of BVF Inc. may be deemed to beneficially own the 1,769,029 Shares beneficially owned by BVF Inc., excluding 5,003,000 Shares issuable upon the conversion of the Series X Preferred Stock and 1,252,772 Shares issuable upon the conversion of the Series Y Preferred Stock, representing percentage ownership of approximately 20.4% of the Shares outstanding.

As of the date hereof, Mr. Perry beneficially owned 27,021 Shares, including 15,222 Shares issuable on the exercise of certain options that are currently exercisable, representing percentage ownership of less than 1%.

(b) Each of BVF, BVF2 and Trading Fund OS shares with Partners voting and dispositive power over the Shares each such entity beneficially owns. Trading Fund OS shares with Partners OS, voting and dispositive power over the Shares beneficially owned by Trading Fund OS. Partners, BVF Inc. and Mr. Lampert share voting and dispositive power over the 1,769,029 Shares 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 during the past sixty days by the Reporting Persons. All of such transactions were effected in the open market, except as otherwise noted.

Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer.  
Item 6 is hereby amended to add the following:

As described in Item 4 above, certain of the Reporting Persons and the Issuer entered into the Investment Agreement, which is attached as Exhibit 99.1 hereto.

Item 7. Material to be Filed as Exhibits.

Item 7 is hereby amended to add the following exhibit:

99.1 Investment Agreement, dated November 6, 2018.

CUSIP NO. 98419J 206

SIGNATURES

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

Dated: December 20, 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.

By: /s/ Mark N. Lampert  
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



CUSIP NO. 98419J 206

SCHEDULE ATransactions in the Shares During the Past Sixty Days

Class of <u>Security</u>	<u>Shares Purchased</u>	<u>Price (\$)</u>	<u>Date of Purchase</u>
-----------------------------	-------------------------	-------------------	-------------------------

BIOTECHNOLOGY VALUE FUND, L.P.

Series Y Convertible Preferred Stock	345.313 <sup>1</sup>	13,000	12/14/2018
Series Y Convertible Preferred Stock	310.646 <sup>1</sup>	13,000	12/18/2018

BIOTECHNOLOGY VALUE FUND II, L.P.

Common Stock	21,141	13.3088	11/15/2018
Common Stock	10,849	13.8249	11/16/2018
Common Stock	9,771	13.9253	11/19/2018
Common Stock	37,482	13.6786	11/20/2018
Common Stock	25,000	14.9957	11/21/2018
Common Stock	11,396	15.2404	11/27/2018
Common Stock	8,288	15.1136	11/28/2018
Common Stock	10,016	14.9304	11/29/2018
Common Stock	4,823	14.8486	11/30/2018
Common Stock	806	14.9000	12/03/2018
Common Stock	4,171	14.9880	12/04/2018
Common Stock	10,927	14.7980	12/06/2018
Common Stock	32,015	14.7674	12/07/2018
Common Stock	18,081	14.5441	12/10/2018
Common Stock	9,400	14.4968	12/11/2018
Common Stock	2,810	14.7500	12/12/2018
Common Stock	24,253	14.4116	12/13/2018
Series Y Convertible Preferred Stock	224.813 <sup>1</sup>	13,000	12/14/2018
Common Stock	25,000	14.1917	12/17/2018
Series Y Convertible Preferred Stock	372 <sup>1</sup>	13,000	12/18/2018

<sup>1</sup> Shares acquired in connection with the Rights Offering.