

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)¹

BioLineRx Ltd.
(Name of Issuer)

Ordinary Shares, par value NIS 0.10 per share
(Title of Class of Securities)

09071M106
(CUSIP Number)

MARK N. LAMPERT
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)

February 7, 2019
(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 13,999,739*
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 13,999,739*
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 13,999,739*	
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) 9.6%*	
14	TYPE OF REPORTING PERSON PN	

* Represents 13,999,739 American Depositary Shares ("ADS") (each ADS represents one Share), including (i) 1,431,750 ADSs issuable upon the exercise of certain Series A Warrants (as defined below) and (ii) 1,431,750 ADSs issuable upon the exercise of certain Series B Warrants (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 10,541,420*
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 10,541,420*
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 10,541,420*	
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) 7.3*%	
14	TYPE OF REPORTING PERSON PN	

* Represents 10,541,420 ADSs (each ADS represents one Share), including (i) 893,040 ADSs issuable upon the exercise of certain Series A Warrants (as defined below) and (ii) 893,040 ADSs issuable upon the exercise of certain Series B Warrants (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 2,663,570*
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 2,663,570*
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 2,663,570*	
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) 1.9%*	
14	TYPE OF REPORTING PERSON PN	

* Represents 2,663,570 ADSs (each ADS represents one Share), including (i) 247,807 ADSs issuable upon the exercise of certain Series A Warrants (as defined below) and (ii) 247,807 ADSs issuable upon the exercise of certain Series B Warrants (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 2,663,570*
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 2,663,570*
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 2,663,570*	
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) 1.9%*	
14	TYPE OF REPORTING PERSON CO	

* Represents 2,663,570 ADSs (each ADS represents one Share), including (i) 247,807 ADSs issuable upon the exercise of certain Series A Warrants (as defined below) and (ii) 247,807 ADSs issuable upon the exercise of certain Series B Warrants (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 31,942,477*
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 31,942,477*
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 31,942,477*	
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) 21.5%*	
14	TYPE OF REPORTING PERSON PN, IA	

* Represents 31,942,477 ADSs (each ADS represents one Share), including (i) 2,973,451 ADSs issuable upon the exercise of certain Series A Warrants (as defined below) and (ii) 2,973,451 ADSs issuable upon the exercise of certain Series B Warrants (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 31,942,477*
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 31,942,477*
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 31,942,477*	
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) 21.5%*	
14	TYPE OF REPORTING PERSON CO	

* Represents 31,942,477 ADSs (each ADS represents one Share), including (i) 2,973,451 ADSs issuable upon the exercise of certain Series A Warrants (as defined below) and (ii) 2,973,451 ADSs issuable upon the exercise of certain Series B Warrants (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 31,942,477*
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 31,942,477*
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 31,942,477*	
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) 21.5%*	
14	TYPE OF REPORTING PERSON IN	

* Represents 31,942,477 ADSs (each ADS represents one Share), including (i) 2,973,451 ADSs issuable upon the exercise of certain Series A Warrants (as defined below) and (ii) 2,973,451 ADSs issuable upon the exercise of certain Series B Warrants (as defined below).

The following constitutes Amendment No. 1 to the Schedule 13D filed by the undersigned (“Amendment No. 1”). This Amendment No. 1 is being filed to reflect a more than one percent (1%) change in the Reporting Persons’ position in the Issuer due to a change in the Issuer’s outstanding share count. 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 ADSs and Warrants (as defined below) 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. The aggregate purchase price of the 11,136,239 ADSs beneficially owned by BVF is approximately \$9,900,871, including brokerage commissions. The aggregate purchase price of the 8,755,340 ADSs beneficially owned by BVF2 is approximately \$7,824,334, including brokerage commissions. The aggregate purchase price of the 2,167,956 ADSs beneficially owned by Trading Fund OS is approximately \$1,941,233, including brokerage commissions. The aggregate purchase price of the 3,936,040 ADSs beneficially owned by the Partners Managed Accounts is approximately \$3,504,920, including brokerage commissions.

In connection with the Subscription Agreement (as previously defined and described in the Schedule 13D), the Reporting Persons purchased (i) Series A warrants to purchase an aggregate of 2,973,451 ADSs at an exercise price of \$2.00 per Share (the “Series A Warrants”) and (ii) Series B warrants to purchase an aggregate of 2,973,451 ADSs at an exercise price of \$4.00 per Share (the “Series B Warrants”) and together with the Series A Warrants, the “Warrants”). The aggregate purchase price of the 1,431,750 Series A Warrants beneficially owned by BVF is approximately \$388,491, including brokerage commissions. The aggregate purchase price of the 1,431,750 Series B Warrants beneficially owned by BVF is approximately \$187,980, including brokerage commissions. The aggregate purchase price of the 893,040 Series A Warrants beneficially owned by BVF2 is approximately \$242,317, including brokerage commissions. The aggregate purchase price of the 893,040 Series B Warrants beneficially owned by BVF2 is approximately \$117,250, including brokerage commissions. The aggregate purchase price of the 247,807 Series A Warrants beneficially owned by Trading Fund OS is approximately \$67,240, including brokerage commissions. The aggregate purchase price of the 247,807 Series B Warrants beneficially owned by Trading Fund OS is approximately \$32,535, including brokerage commissions. The aggregate purchase price of the 400,854 Series A Warrants held in the Partners Managed Accounts is approximately \$108,768, including brokerage commissions. The aggregate purchase price of the 400,854 Series B Warrants held in the Partners Managed Accounts is approximately \$52,630, including brokerage commissions.

Item 5. Interest in Securities of the Issuer.

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

(a) The aggregate percentages of Shares reported owned by each person named herein is based on a denominator which is the sum of (i) 114,930,636 Shares, which is the number of Shares outstanding as of December 26, 2018, as reported by the Issuer on its Form F-3 filed with the Securities and Exchange Commission (the “SEC”) on December 26, 2018, (ii) 28,000,000 Shares issued in connection with a public offering by the Issuer, as reported on its Form 6-K filed with the SEC on February 7, 2019, and (iii) certain or all of the 5,946,902 ADSs issuable upon the exercise of the Warrants, as applicable.

As of the close of business on March 1, 2019, (i) BVF beneficially owned 13,999,739 Shares (represented by 13,999,739 ADSs, including 1,431,750 ADSs issuable upon the exercise of Series A Warrants and 1,431,750 ADSs issuable upon the exercise of Series B Warrants), (ii) BVF2 beneficially owned 10,541,420 Shares (represented by 10,541,420 ADSs, including 893,040 ADSs issuable upon the exercise of Series A Warrants and 893,040 ADSs issuable on Series B Warrants), (iii) Trading Fund OS beneficially owned 2,663,570 Shares (represented by 2,663,570 ADSs, including 247,807 ADSs issuable upon the exercise of Series A Warrants and 247,807 ADSs issuable upon the exercise of Series B Warrants), and (iv) 4,737,748 Shares (represented by 4,737,748 ADSs, including 400,854 ADSs issuable upon the exercise of Series A Warrants and 400,854 issuable upon Series B Warrants) were held in the Partners Managed Accounts, representing percentage ownership of approximately 9.6%, 7.3%, 1.9%, and 3.3%, respectively, of the Shares outstanding.

As of the close of business on March 1, 2019, (i) BVF beneficially owned Series A Warrants to purchase 1,431,750 ADSs and Series B Warrants to purchase 1,431,750 ADSs, (ii) BVF2 beneficially owned Series A Warrants to purchase 893,040 ADSs and Series B Warrants to purchase 893,040 ADSs, (iii) Trading Fund OS beneficially owned Series A Warrants to purchase 247,807 ADSs and Series B Warrants to purchase 247,807 ADSs, and (iv) Series A Warrants to purchase 400,854 ADSs and Series B Warrants to purchase 400,854 ADSs were held in the Partners Managed Accounts. The Warrants are subject to a blocker provision that precludes the holders from exercising the Warrants to the extent that the holder and its affiliates would beneficially own (as determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended) in excess of 24.99% of the Shares outstanding immediately after giving effect to such exercise (the "Beneficial Ownership Limitation"). As of the close of business on March 1, 2019, the Beneficial Ownership Limitation does not limit the exercise of the Warrants by the Reporting Persons.

Partners OS, as the general partner of Trading Fund OS, may be deemed to beneficially own the 2,663,570 Shares beneficially owned by Trading Fund OS.

Partners, as the general partner of BVF and 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 31,942,477 Shares beneficially owned in the aggregate by BVF, BVF2, Trading Fund OS, and the Partners Managed Accounts, representing percentage ownership of approximately 21.5% of the Shares outstanding.

BVF Inc., as the general partner of Partners, may be deemed to beneficially own the 31,942,477 Shares beneficially owned by Partners, representing percentage ownership of approximately 21.5% of the Shares outstanding.

Mr. Lampert, as a director and officer of BVF Inc., may be deemed to beneficially own the 31,942,477 Shares beneficially owned by BVF Inc., representing percentage ownership of approximately 21.5% of the Shares outstanding.

(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 31,942,477 Shares they may be deemed to beneficially own with BVF, BVF2, Trading Fund OS and Partners OS.

(c) The Reporting Persons have not entered into any transactions in the Shares in the past sixty days.

The Reporting Persons, as members of a "group" for the purposes of Section 13(d)(3) of the Securities Exchange Act of 1934, as amended, may be deemed the beneficial owner of the Shares directly owned by the other Reporting Persons. Each Reporting Person disclaims beneficial ownership of such Shares except to the extent of his or its pecuniary interest therein.

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: March 1, 2019

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

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