

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

**SCHEDULE 13G
(Rule 13d-102)**

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT
TO RULES 13d-1(b), (c), AND (d) AND AMENDMENTS THERETO FILED
PURSUANT TO RULE 13d-2(b)

(Amendment No. 1)¹

Palvella Therapeutics, Inc.
(Name of Issuer)

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

697947109
(CUSIP Number)

December 13, 2024
(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)

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	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 843,478 (1)
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 843,478 (1)
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 843,478 (1)	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 7.2% (1)	
12	TYPE OF REPORTING PERSON PN	

(1) Includes 471,562 Shares (as defined in Item 2) underlying certain Pre-Funded Warrants (as defined in Item 4).

1	NAME OF REPORTING PERSON BVF I GP LLC	
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	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 843,478 (1)
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 843,478 (1)
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 843,478 (1)	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 7.2% (1)	
12	TYPE OF REPORTING PERSON OO	

(1) Includes 471,562 Shares underlying certain Pre-Funded Warrants.

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	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 282,223
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 282,223
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 282,223	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 2.5%	
12	TYPE OF REPORTING PERSON PN	

1	NAME OF REPORTING PERSON BVF II GP LLC	
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	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 282,223
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 282,223
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 282,223	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 2.5%	
12	TYPE OF REPORTING PERSON OO	

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	CITIZENSHIP OR PLACE OF ORGANIZATION Cayman Islands	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 38,961
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 38,961
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 38,961	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) Less than 1%	
12	TYPE OF REPORTING PERSON PN	

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	CITIZENSHIP OR PLACE OF ORGANIZATION Cayman Islands	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 38,961
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 38,961
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 38,961	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) Less than 1%	
12	TYPE OF REPORTING PERSON CO	

1	NAME OF REPORTING PERSON BVF GP Holdings LLC	
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	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 1,125,701 (1)
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 1,125,701 (1)
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,125,701 (1)	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 9.6% (1)	
12	TYPE OF REPORTING PERSON OO	

(1) Includes 471,562 Shares underlying certain Pre-Funded Warrants.

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	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 1,168,117 (1)
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 1,168,117 (1)
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,168,117 (1)	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 9.99% (1)	
12	TYPE OF REPORTING PERSON PN, IA	

(1) Includes 471,562 Shares underlying certain Pre-Funded Warrants.

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	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 1,168,117 (1)
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 1,168,117 (1)
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,168,117 (1)	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 9.99% (1)	
12	TYPE OF REPORTING PERSON CO	

(1) Includes 471,562 Shares underlying certain Pre-Funded Warrants.

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	CITIZENSHIP OR PLACE OF ORGANIZATION United States	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 1,168,117 (1)
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 1,168,117 (1)
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,168,117 (1)	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 9.99% (1)	
12	TYPE OF REPORTING PERSON IN	

(1) Includes 471,562 Shares underlying certain Pre-Funded Warrants.

Item 1(a). Name of Issuer:

Palvella Therapeutics, Inc., a Nevada corporation (the "Issuer").

Item 1(b). Address of Issuer's Principal Executive Offices:

125 Strafford Ave, Suite 360
Wayne, Pennsylvania 19087

Item 2(a). Name of Person Filing

Item 2(b). Address of Principal Business Office or, if None, Residence

Item 2(c). Citizenship

Biotechnology Value Fund, L.P. ("BVF")
44 Montgomery St., 40th Floor
San Francisco, California 94104
Citizenship: Delaware

BVF I GP LLC ("BVF GP")
44 Montgomery St., 40th Floor
San Francisco, California 94104
Citizenship: Delaware

Biotechnology Value Fund II, L.P. ("BVF2")
44 Montgomery St., 40th Floor
San Francisco, California 94104
Citizenship: Delaware

BVF II GP LLC ("BVF2 GP")
44 Montgomery St., 40th Floor
San Francisco, California 94104
Citizenship: Delaware

Biotechnology Value Trading Fund OS LP ("Trading Fund OS")
PO Box 309 Uglan House
Grand Cayman, KY1-1104
Cayman Islands
Citizenship: Cayman Islands

BVF Partners OS Ltd. ("Partners OS")
PO Box 309 Uglan House
Grand Cayman, KY1-1104
Cayman Islands
Citizenship: Cayman Islands

BVF GP Holdings LLC ("BVF GPH")
44 Montgomery St., 40th Floor
San Francisco, California 94104
Citizenship: Delaware

BVF Partners L.P. ("Partners")
44 Montgomery St., 40th Floor
San Francisco, California 94104
Citizenship: Delaware

BVF Inc.
44 Montgomery St., 40th Floor
San Francisco, California 94104
Citizenship: Delaware

Mark N. Lampert ("Mr. Lampert")
44 Montgomery St., 40th Floor
San Francisco, California 94104
Citizenship: United States

Each of the foregoing is referred to as a "Reporting Person" and collectively as the "Reporting Persons."

Item 2(d). Title of Class of Securities:

Common Stock, \$0.001 par value per share (the "Shares").

Item 2(e). CUSIP Number:

697947109

Item 3. If This Statement is Filed Pursuant to Rule 13d-1(b), or 13d-2(b) or (c), Check Whether the Person Filing is a:

- | | | |
|-----|-------------------------------------|--|
| | <input checked="" type="checkbox"/> | Not applicable. |
| (a) | <input type="checkbox"/> | Broker or dealer registered under Section 15 of the Exchange Act. |
| (b) | <input type="checkbox"/> | Bank as defined in Section 3(a)(6) of the Exchange Act. |
| (c) | <input type="checkbox"/> | Insurance company as defined in Section 3(a)(19) of the Exchange Act. |
| (d) | <input type="checkbox"/> | Investment company registered under Section 8 of the Investment Company Act. |
| (e) | <input type="checkbox"/> | An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E). |
| (f) | <input type="checkbox"/> | An employee benefit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii)(F). |
| (g) | <input type="checkbox"/> | A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G). |
| (h) | <input type="checkbox"/> | A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act. |
| (i) | <input type="checkbox"/> | A church plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act. |
| (j) | <input type="checkbox"/> | A non-U.S. institution, in accordance with Rule 13d-1(b)(1)(ii)(J). |
| (k) | <input type="checkbox"/> | Group, in accordance with Rule 13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with Rule 13d-1(b)(1)(ii)(J), please specify the type of institution: _____ |

Item 4. Ownership

(a) Amount beneficially owned:

As of the close of business on the date hereof, the Reporting Persons and one of the Partners managed accounts (the “Partners Managed Accounts”) held certain Pre-Funded Warrants (the “Pre-Funded Warrants”) exercisable for an aggregate of 1,071,695 Shares. The Pre-Funded Warrants are exercisable at any time at an exercise price of \$0.001 per Share and do not expire. A holder of Pre-Funded Warrants may not exercise such Pre-Funded Warrants if the holder, together with its affiliates, would beneficially own more than 9.99% of the number of Shares outstanding immediately after giving effect to such exercise (the “Pre-Funded Warrants Blocker”). As of the close of business on the date hereof, the Pre-Funded Warrants Blocker limits the exercise of the Pre-Funded Warrants held by the Reporting Persons and one of the Partners Managed Accounts to 471,562 Shares underlying the Pre-Funded Warrants held by them.

As of the close of business on the date hereof, the Reporting Persons hold an aggregate of 85 shares of Series A Convertible Preferred Stock (the “Series A Preferred Stock”), convertible into an aggregate of 1,133 Shares. Each share of the Series A Preferred Stock is convertible into 13.34 Shares. The Series A 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 (the “Exchange Act”), more than 9.99% of the number of Shares then issued and outstanding (the “Conversion A Limitation”). As of the close of business on the date hereof, the Conversion A Limitation prohibits the conversion of all of the Series A Preferred Stock held by the Reporting Persons.

As of the close of business on the date hereof, the Reporting Persons hold an aggregate of 4,026 shares of Series B Convertible Preferred Stock (the “Series B Preferred Stock”), convertible into an aggregate of 53,706 Shares. Each share of the Series B Preferred Stock is convertible into 13.34 Shares. The Series B 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 Exchange Act, more than 9.99% of the number of Shares then issued and outstanding (the “Conversion B Limitation”). As of the close of business on the date hereof, the Conversion B Limitation prohibits the conversion of all of the Series B Preferred Stock held by the Reporting Persons.

As of the close of business on the date hereof, the Reporting Persons hold an aggregate of 3,506 shares of Series C Convertible Preferred Stock (the “Series C Preferred Stock”), convertible into an aggregate of 46,770 Shares. Each share of the Series C Preferred Stock is convertible into 13.34 Shares. The Series C 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 Exchange Act, more than 9.99% of the number of Shares then issued and outstanding (the “Conversion C Limitation”). As of the close of business on the date hereof, the Conversion C Limitation prohibits the conversion of all of the Series C Preferred Stock held by the Reporting Persons.

As of the close of business on the date hereof, the Reporting Persons hold an aggregate of 3,000 shares of Series D Convertible Preferred Stock (the "Series D Preferred Stock"), convertible into an aggregate of 40,020 Shares. Each share of the Series D Preferred Stock is convertible into 13.34 Shares. The Series D 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 Exchange Act, more than 9.99% of the number of Shares then issued and outstanding (the "Conversion D Limitation"). As of the close of business on the date hereof, the Conversion D Limitation prohibits the conversion of all of the Series D Preferred Stock held by the Reporting Persons.

The Reporting Persons and one of the Partners Managed Accounts hold an aggregate of 5,000 shares of Series E Convertible Preferred Stock (the "Series E Preferred Stock"), convertible into an aggregate of 66,700 Shares. Each share of the Series E Preferred Stock is convertible into 13.34 Shares. The Series E 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 Exchange Act, more than 9.99% of the number of Shares then issued and outstanding (the "Conversion E Limitation"). As of the close of business on the date hereof, the Conversion E Limitation prohibits the conversion of all of the Series E Preferred Stock held by the Reporting Persons and the Partners Managed Accounts.

As of the close of business on the date hereof, (i) BVF beneficially owned 843,478 Shares, including 471,562 Shares underlying certain Pre-Funded Warrants held by it and excluding (a) 27,787 Shares issuable upon the conversion of the Series B Preferred Stock held by it, (b) 23,959 Shares issuable upon the conversion of the Series C Preferred Stock held by it, (c) 23,465 Shares issuable upon the conversion of the Series D Preferred Stock held by it, (d) 35,618 Shares issuable upon the conversion of the Series E Preferred Stock held by it, and (e) 89,932 Shares underlying certain Pre-Funded Warrants held by it, (ii) BVF2 beneficially owned 282,223 Shares, excluding (a) 22,131 Shares issuable upon the conversion of the Series B Preferred Stock held by it, (b) 19,276 Shares issuable upon the conversion of the Series C Preferred Stock held by it, (c) 14,381 Shares issuable upon the conversion of the Series D Preferred Stock held by it, (d) 24,906 Shares issuable upon the conversion of the Series E Preferred Stock held by it, and (e) 445,782 Shares underlying the Pre-Funded Warrants held by it, and (iii) Trading Fund OS beneficially owned 38,961 Shares, excluding (a) 1,133 Shares issuable upon the conversion of the Series A Preferred Stock held by it, (b) 3,788 Shares issuable upon the conversion of the Series B Preferred Stock held by it, (c) 3,535 Shares issuable upon the conversion of the Series C Preferred Stock held by it, (d) 2,174 Shares issuable upon the conversion of the Series D Preferred Stock held by it, (e) 2,148 Shares issuable upon the conversion of the Series E Preferred Stock held by it, and (e) 44,770 Shares issuable upon the exercise of the Pre-Funded Warrants held by it.

BVF GP, as the general partner of BVF, may be deemed to beneficially own the 843,478 Shares beneficially owned by BVF.

BVF2 GP, as the general partner of BVF2, may be deemed to beneficially own the 282,223 Shares beneficially owned by BVF2.

Partners OS, as the general partner of Trading Fund OS, may be deemed to beneficially own the 38,961 Shares beneficially owned by Trading Fund OS.

BVF GPH, as the sole member of each of BVF GP and BVF2 GP, may be deemed to beneficially own the 1,125,701 Shares beneficially owned in the aggregate by BVF and BVF2.

Partners, as the investment manager of BVF, BVF2 and Trading Fund OS, and the sole member of Partners OS, may be deemed to beneficially own the 1,168,117 Shares beneficially owned in the aggregate by BVF, BVF2 and Trading Fund OS and held in the Partners Managed Accounts, including 3,455 Shares held in the Partners Managed Accounts, and excluding (a) 4,028 Shares issuable upon the conversion of the Series E Preferred Stock held in one of the Partners Managed Accounts, and (b) 19,649 Shares underlying the Pre-Funded Warrants held in one of the Partners Managed Accounts.

BVF Inc., as the general partner of Partners, may be deemed to beneficially own the 1,168,117 Shares beneficially owned by Partners.

Mr. Lampert, as a director and officer of BVF Inc., may be deemed to beneficially own the 1,168,117 Shares beneficially owned by BVF Inc.

The foregoing should not be construed in and of itself as an admission by any Reporting Person as to beneficial ownership of any Shares owned by another Reporting Person. BVF GP disclaims beneficial ownership of the Shares beneficially owned by BVF. BVF2 GP disclaims beneficial ownership of the Shares beneficially owned by BVF2. Partners OS disclaims beneficial ownership of the Shares beneficially owned by Trading Fund OS. BVF GPH disclaims beneficial ownership of the Shares beneficially owned by BVF and BVF2. Each of Partners, BVF Inc. and Mr. Lampert disclaims beneficial ownership of the Shares beneficially owned by BVF, BVF2 and Trading Fund OS and held in the Partners Managed Accounts, and the filing of this statement shall not be construed as an admission that any such person or entity is the beneficial owner of any such securities.

(b) Percent of class:

The following percentages are based upon a denominator that is the sum of: (i) 11,221,307 Shares outstanding as of December 13, 2024, which is the total number of Shares outstanding as reported in the Issuer's Current Report on Form 8-K filed with the Securities and Exchange Commission on December 16, 2024, and (ii) 471,562 Shares underlying the Pre-Funded Warrants held by the Reporting Persons, as applicable.

As of the close of business on the date hereof, (i) BVF beneficially owned approximately 7.2% of the outstanding Shares, (ii) BVF2 beneficially owned approximately 2.5% of the outstanding Shares, (iii) Trading Fund OS beneficially owned less than 1% of the outstanding Shares, (iv) BVF GP may be deemed to beneficially own approximately 7.2% of the outstanding Shares, (v) BVF2 GP may be deemed to beneficially own approximately 2.5% of the outstanding Shares, (vi) Partners OS may be deemed to beneficially own less than 1% of the outstanding Shares, (vii) BVF GPH may be deemed to beneficially own approximately 9.6% of the outstanding Shares, and (viii) each of Partners, BVF Inc. and Mr. Lampert may be deemed to beneficially own approximately 9.99% of the outstanding Shares (less than 1% of the outstanding Shares are held in the Partners Managed Accounts).

- (c) Number of shares as to which such person has:
 - (i) Sole power to vote or to direct the vote
See Cover Pages Items 5-9.
 - (ii) Shared power to vote or to direct the vote
See Cover Pages Items 5-9.
 - (iii) Sole power to dispose or to direct the disposition of
See Cover Pages Items 5-9.
 - (iv) Shared power to dispose or to direct the disposition of
See Cover Pages Items 5-9.

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

Not Applicable.

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

BVF GP, BVF GPH, Partners, BVF Inc. and Mr. Lampert share voting and dispositive power over the Shares beneficially owned by BVF. BVF GPH, Partners, BVF Inc. and Mr. Lampert share voting and dispositive power over the Shares beneficially owned by BVF2. Partners, BVF Inc. and Mr. Lampert share voting and dispositive power over the Shares beneficially owned by Trading Fund OS and held in the Partners Managed Accounts.

Item 7. Identification and Classification of the Subsidiary That 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.

See Exhibit 99.1 to the Schedule 13G filed by the Reporting Persons with the Securities and Exchange Commission on May 17, 2024.

Item 9. Notice of Dissolution of Group.

Not Applicable.

Item 10. Certifications.

By signing below each of the undersigned certifies that, to the best of its knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

SIGNATURE

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: December 17, 2024

BIOTECHNOLOGY VALUE FUND, L.P.

By: BVF I GP LLC, its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
Chief Executive Officer

BVF I GP LLC

By: /s/ Mark N. Lampert
Mark N. Lampert
Chief Executive Officer

BIOTECHNOLOGY VALUE FUND II, L.P.

By: BVF II GP LLC, its general partner

By: /s/ Mark N. Lampert
Mark N. Lampert
Chief Executive Officer

BVF II GP LLC

By: /s/ Mark N. Lampert
Mark N. Lampert
Chief Executive Officer

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

BVF GP HOLDINGS LLC

By: /s/ Mark N. Lampert
Mark N. Lampert
Chief Executive Officer

BVF PARTNERS L.P.

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