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. 2)¹

89bio, Inc. (Name of Issuer)

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

282559103

(CUSIP Number)

December 31, 2023

(Date of Event Which Requires Filing of this Statement)

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

 \square Rule 13d-1(b)

 \boxtimes Rule 13d-1(c)

 \Box 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*).

	4		
1	NAME OF REPO	RTING PERSON	
		gy Value Fund, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP $(a) \boxtimes$		
			(b) 🗆
3	SEC USE ONLY		
4	CITIZENSHIP OI	R PLACE OF ORGANIZATION	
	D I		
	Delaware 5	SOLE VOTING POWER	
NUMBER OF SHARES	5	SOLE VOTING POWER	
BENEFICIALLY		0	
OWNED BY	6	SHARED VOTING POWER	
EACH	0	SHARED VOTINGTOWER	
REPORTING		3,973,784 (1)	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
	,		
		0	
	8	SHARED DISPOSITIVE POWER	
		3,973,784 (1)	
9	AGGREGATE AN	MOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	3,973,784 (
10	CHECK BOX IF	THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11			
11	PERCENT OF CI	LASS REPRESENTED BY AMOUNT IN ROW (9)	
	4.2% (1)		
12	4.2% (1) TYPE OF REPOR	TING DEDSON	
12	I I PE OF KEPOF	ALINU LEVOON	
	PN		
<u> </u>	111		

(1) Includes 1,904,636 Shares (as defined below) underlying certain Warrants (as defined below).

1	NAME OF REPO	RTING PERSON	
	BVF I GP I		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP $(a) \boxtimes$		
			(b) 🗆
3	SEC USE ONLY		
5	SEC USE ONEI		
4	CITIZENSHIP O	R PLACE OF ORGANIZATION	
	Delaware		
NUMBER OF SHARES	5	SOLE VOTING POWER	
BENEFICIALLY		0	
OWNED BY	6	SHARED VOTING POWER	
EACH	-		
REPORTING		3,973,784 (1)	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
	8	0 SHARED DISPOSITIVE POWER	
	8	SHARED DISI OSHTVETOWER	
		3,973,784 (1)	
9	AGGREGATE A	MOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
10	3,973,784 (
10	CHECK BUX IF	THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11	PERCENT OF CI	LASS REPRESENTED BY AMOUNT IN ROW (9)	
	4.2% (1)		
12	TYPE OF REPOR	KTING PERSON	
	00		

(1) Includes 1,904,636 Shares underlying certain Warrants.

1	NAME OF REPO	PRTING PERSON	
		bgy Value Fund II, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a		
			(b) 🗆
3	SEC USE ONLY		
4	CITIZENSHIP O	R PLACE OF ORGANIZATION	
	Delaware		
NUMBER OF	5	SOLE VOTING POWER	
SHARES	5	SOLE VOTINGTOWER	
BENEFICIALLY		0	
OWNED BY	6	SHARED VOTING POWER	
EACH	Ŭ		
REPORTING		3,098,565 (1)	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
		0	
	8	SHARED DISPOSITIVE POWER	
		3,098,565 (1)	
9	AGGREGATE A	MOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	3,098,565 (1)	
10		THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
10	CHECK BOA IF	THE AGGREGATE AWOUNT IN NOW (2) EACLODES CERTAIN SHARES	
11	PERCENT OF CI	LASS REPRESENTED BY AMOUNT IN ROW (9)	
	3.3% (1)		
12	TYPE OF REPOR	RTING PERSON	
	PN		

(1) Includes 1,398,148 Shares underlying certain Warrants.

1		
NAME OF REPC	DRTING PERSON	
CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP		$\begin{array}{c} (a) \boxtimes \\ (b) \square \end{array}$
		(0)
SEC USE ONLY		
CITIZENSHIP O	R PLACE OF ORGANIZATION	
Delaware		
5	SOLE VOTING POWER	
_		
	0	
6	SHARED VOTING POWER	
	2,000,575 (1)	
7		
/	SOLE DISPOSITIVE POWER	
	0	
8	SHARED DISPOSITIVE POWER	
AGGREGATE A	MOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
3 098 565 (1)	
PERCENT OF CI	LASS REPRESENTED BY AMOUNT IN ROW (9)	
3.3%(1)		
	RTING PERSON	
00		
	BVF II GP CHECK THE AP SEC USE ONLY CITIZENSHIP O Delaware 5 6 7 8 AGGREGATE A 3,098,565 (CHECK BOX IF PERCENT OF CI 3.3% (1) TYPE OF REPOI	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware 5 SOLE VOTING POWER 0 6 SHARED VOTING POWER 3,098,565 (1) 7 SOLE DISPOSITIVE POWER 0 8 SHARED DISPOSITIVE POWER 3,098,565 (1) AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 3,098,565 (1) CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 3.3% (1) TYPE OF REPORTING PERSON

(1) Includes 1,398,148 Shares underlying certain Warrants.

1	NAME OF REPO	RTING PERSON	
		gy Value Trading Fund OS LP	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP		(a) 🗵
			(b) 🗆
3	SEC USE ONLY		
4	CITIZENSHIP O	R PLACE OF ORGANIZATION	
7	CITIZENSIII OI		
	Cayman Isla	ands	
NUMBER OF	5	SOLE VOTING POWER	
SHARES			
BENEFICIALLY		0	
OWNED BY	6	SHARED VOTING POWER	
EACH			
REPORTING		387,766 (1)	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
		0	
	8	SHARED DISPOSITIVE POWER	
	0	SIMALD DISCOSITIVE FOWER	
		387,766 (1)	
9	AGGREGATE A	MOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	387,766 (1)		
10	CHECK BOX IF	THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11	DEDOENT OF OF		
11	PERCENT OF CI	LASS REPRESENTED BY AMOUNT IN ROW (9)	
	Less than 19	% (1)	
12	TYPE OF REPOR		
12			
	PN		
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(1) Includes 166,453 Shares underlying certain Warrants.

	-			
1	NAME OF REPO	DRTING PERSON		
	BVF Partne			
2	CHECK THE AP	PROPRIATE BOX IF A MEMBER OF A GROUP	$(a) \boxtimes$	
			(b) 🗆	
3	SEC USE ONLY			
5	SEC USE UNLI			
4	CITIZENSHIP O	R PLACE OF ORGANIZATION		
	Cayman Isl			
NUMBER OF	5	SOLE VOTING POWER		
SHARES BENEFICIALLY		0		
OWNED BY	6	SHARED VOTING POWER		
EACH	0	Shinked volino rowek		
REPORTING		387,766 (1)		
PERSON WITH	7	SOLE DISPOSITIVE POWER		
	8	SHARED DISPOSITIVE POWER		
		387,766 (1)		
9	AGGREGATE A	MOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		
	387,766 (1)			
10	CHECK BOX IF	THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES		
11	PERCENT OF C	LASS REPRESENTED BY AMOUNT IN ROW (9)		
**				
	Less than 1			
12	TYPE OF REPO	RTING PERSON		
	СО			

(1) Includes 166,453 Shares underlying certain Warrants.

	1		
1	NAME OF REPO	RTING PERSON	
	BVF GP Ho		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) \boxtimes		
			(b) 🗆
3	SEC USE ONLY		
3	SEC USE ONLY		
4	CITIZENSHIP OF	R PLACE OF ORGANIZATION	
	Delaware		
NUMBER OF	5	SOLE VOTING POWER	
SHARES			
BENEFICIALLY		0	
OWNED BY	6	SHARED VOTING POWER	
EACH REPORTING		7 072 340 (1)	
PERSON WITH	7	7,072,349 (1) SOLE DISPOSITIVE POWER	
I EROON WITH	/	SOLE DISI OSITIVE FOWER	
		0	
	8	SHARED DISPOSITIVE POWER	
		7,072,349 (1)	
9	AGGREGATE AN	NOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	7.070.040./1	<u>,</u>	
10	7,072,349 (1) THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
10	CHECK DUA IF	THE AUGREUATE AMOUNT IN ROW (9) EACLUDES CERTAIN SHARES	
11	PERCENT OF CL	ASS REPRESENTED BY AMOUNT IN ROW (9)	
	7.3% (1)		
12	TYPE OF REPOR	TING PERSON	
	00		

(1) Includes 3,302,784 Shares underlying certain Warrants.

1	NAME OF REPO	PRTING PERSON	
	BVF Partne		(a) 🗵
2			
			(b) 🗆
3	SEC USE ONLY		
4		R PLACE OF ORGANIZATION	
4	CITIZENSHIF U	R FLACE OF ORDANIZATION	
	Delaware		
NUMBER OF	5	SOLE VOTING POWER	
SHARES			
BENEFICIALLY		0	
OWNED BY	6	SHARED VOTING POWER	
EACH			
REPORTING		7,568,480 (1)	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
	8	0 SHARED DISPOSITIVE POWER	
	0	SHARED DISPOSITIVE POWER	
		7,568,480 (1)	
9	AGGREGATE A	MOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	7,568,480 (1)	
10	CHECK BOX IF	THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11	PERCENT OF CI	LASS REPRESENTED BY AMOUNT IN ROW (9)	
	7.8% (1)		
12	TYPE OF REPOR	PTING PERSON	
12			
	PN, IA		
	7		

(1) Includes 3,521,126 Shares underlying certain Warrants.

	<u>.</u>		
1	NAME OF REPO	RTING PERSON	
	BVF Inc.		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a)		
			(b) 🗆
3	SEC USE ONLY		
4			
4	CITIZENSHIP O	R PLACE OF ORGANIZATION	
	Delaware		
NUMBER OF	5	SOLE VOTING POWER	
SHARES	5	Sole voluciowek	
BENEFICIALLY		0	
OWNED BY	6	SHARED VOTING POWER	
EACH			
REPORTING		7,568,480 (1)	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
	8	SHARED DISPOSITIVE POWER	
		7 568 480 (1)	
9	AGGREGATE A	7,568,480 (1) MOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
)	AGOREGALE A	WOUNT BENEFICIALET OWNED DT EACH KEI OKTING FEKSON	
	7,568,480 (1)	
10		THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11	PERCENT OF CI	LASS REPRESENTED BY AMOUNT IN ROW (9)	
	7.8% (1)		
12	TYPE OF REPOR	KTING PERSON	
	СО		
<u> </u>			

(1) Includes 3,521,126 Shares underlying certain Warrants.

1	NAME OF REPO	DRTING PERSON	
	Meels N. L.		
2	Mark N. La	PPROPRIATE BOX IF A MEMBER OF A GROUP	(a) 🗵
2	CHECK THE AF	YRUPKIALE BUX IF A MEMBER OF A GROUP	(a) ⊠ (b) □
			(0)
3	SEC USE ONLY		
-			
4	CITIZENSHIP O	R PLACE OF ORGANIZATION	
	TT 1 10		
NUMPER OF	United Stat	es SOLE VOTING POWER	
NUMBER OF SHARES	5	SOLE VOTING POWER	
BENEFICIALLY		0	
OWNED BY	6	SHARED VOTING POWER	
EACH			
REPORTING		7,568,480 (1)	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
	8	0 SHARED DISPOSITIVE POWER	
	0	SHARED DISI OSHTVE FOWER	
		7,568,480 (1)	
9	AGGREGATE A	MOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
10	7,568,480 (
10	CHECK BOX IF	THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11	PERCENT OF C	LASS REPRESENTED BY AMOUNT IN ROW (9)	
	7.8% (1)		
12	TYPE OF REPO	RTING PERSON	
	IN		
	11N		

(1) Includes 3,521,126 Shares underlying certain Warrants.

Item 1(a).	Name of Issuer:
	89bio, Inc., a Delaware corporation (the "Issuer").
Item 1(b).	Address of Issuer's Principal Executive Offices:
	142 Sansome Street, Second Floor San Francisco, California 94104
Item 2(a). Item 2(b). Item 2(c).	Name of Person Filing Address of Principal Business Office or, if None, Residence 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 Ugland House Grand Cayman, KY1-1104 Cayman Islands Citizenship: Cayman Islands
	BVF Partners OS Ltd. ("Partners OS") PO Box 309 Ugland 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
	12

	San Francis	mery St., 40 sco, Califori o: Delaware	
	44 Montgo San Francis	ampert ("Mu mery St., 40 sco, Califori o: United Sta	nia 94104
	Each of the	e foregoing i	s referred to as a "Reporting Person" and collectively as the "Reporting Persons."
Item 2(d).	Title of Cl	ass of Secu	rities:
	Common S	tock, par va	lue \$0.001 per share (the "Shares")
Item 2(e).	CUSIP Nu	mber:	
	282559103	1	
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:		
		/x/	Not applicable.
	(a)	//	Broker or dealer registered under Section 15 of the Exchange Act.
	(b)	//	Bank as defined in Section 3(a)(6) of the Exchange Act.
	(c)	//	Insurance company as defined in Section 3(a)(19) of the Exchange Act.
	(d)	//	Investment company registered under Section 8 of the Investment Company Act.
	(e)	//	An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E).
	(f)	//	An employee benefit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii)(F).
	(g)	//	A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G).
	(h)	//	A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act.
	(i)	//	A church plan that is excluded from the definition of an investment company under Section $3(c)(14)$ of the Investment Company Act.
	(j)	//	A non-U.S. institution, in accordance with Rule 13d-1(b)(1)(ii)(J).
	(k)	//	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.

(a) Amount beneficially owned:

Ownership

As of the close of business on December 31, 2023, the Reporting Persons and a certain Partners managed account (the "Partners Managed Account") held an aggregate of 7,042,252 common warrants (the "Warrants") exercisable for an aggregate of 3,521,126 Shares. Each Warrant is exercisable for 0.5 Shares at an exercise price of \$5.325 per Share. The Warrants are immediately exercisable and will expire on the second anniversary of the original issuance date. A holder of a Warrant will not be entitled to exercise any portion of such Warrant that, upon giving effect to such exercise, would cause the aggregate number of Shares beneficially owned by such holder (together with its affiliates and any other persons whose beneficial ownership of Shares would be aggregated with the holder for purposes of Section 13(d) of the Securities Exchange Act of 1934) to exceed 9.99% of the total number of then issued and outstanding Shares, as such percentage ownership is determined in accordance with the terms of the Warrant (the "Warrants Blocker"). As of December 31, 2023, the Warrants Blocker does not limit the exercise of any of the Warrants held by the Reporting Persons and the Partners Managed Account.

As of the close of business on December 31, 2023, (i) BVF beneficially owned 3,973,784 Shares, including 1,904,636 Shares underlying the 3,809,271 Warrants held by it; (ii) BVF2 beneficially owned 3,098,565 Shares, including 1,398,148 Shares underlying the 2,796,296 Warrants held by it; and (iii) Trading Fund OS beneficially owned 387,766 Shares, including 166,453 Shares underlying the 332,905 Warrants held by it.

BVF GP, as the general partner of BVF, may be deemed to beneficially own the 3,973,784 Shares beneficially owned by BVF.

BVF2 GP, as the general partner of BVF2, may be deemed to beneficially own the 3,098,565 Shares beneficially owned by BVF2.

Partners OS, as the general partner of Trading Fund OS, may be deemed to beneficially own the 387,766 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 7,072,349 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 7,568,480 Shares beneficially owned in the aggregate by BVF, BVF2 and Trading Fund OS and held in the Partners Managed Account, including 108,366 Shares held in the Partners Managed account, including 51,890 Shares underlying 103,780 Warrants held in the Partners Managed Account.

BVF Inc., as the general partner of Partners, may be deemed to beneficially own the 7,568,480 Shares beneficially owned by Partners.

Mr. Lampert, as a director and officer of BVF Inc., may be deemed to beneficially own the 7,568,480 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 BVF2. BVF2 GP disclaims beneficial ownership of the Shares beneficial ownership of the Shares beneficially owned by BVF2. Partners OS disclaims beneficial ownership of the Shares beneficially owned by BVF2. Partners OS disclaims beneficially owned by BVF2 and BVF2. Each of Partners, BVF Inc. and Mr. Lampert disclaims beneficial ownership of the Shares beneficially owned by BVF2 and Trading Fund OS and held in the Partners Managed Account, 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) 93,206,083 Shares outstanding following the completion of the Issuer's offering as disclosed in the Issuer's Prospectus filed with the Securities and Exchange Commission on December 8, 2023, and (ii) certain or all of the 3,521,126 Shares issuable upon the exercise of the Warrants held by the Reporting Persons, as applicable.

As of the close of business on December 31, 2023, (i) BVF beneficially owned approximately 4.2% of the outstanding Shares, (ii) BVF2 beneficially owned approximately 3.3% 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 4.2% of the outstanding Shares, (v) BVF2 GP may be deemed to beneficially own approximately 3.3% 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 7.3% of the outstanding Shares, and (viii) each of Partners, BVF Inc. and Mr. Lampert may be deemed to beneficially own approximately 7.8% of the outstanding Shares (less than 1% of the outstanding Shares are held in the Partners Managed Account).

- (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 GPH, Partners, BVF Inc. and Mr. Lampert share voting and dispositive power over the Shares beneficially owned by BVF and 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 Account.

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 July 11, 2022.

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: February 14, 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