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. 2)1

MoonLake Immunotherapeutics (Name of Issuer)

<u>Class A Ordinary Shares, \$0.0001 par value per share</u> (Title of Class of Securities)

> 61559X104 (CUSIP Number)

JAMES KRATKY BVF PARTNERS L.P. 44 Montgomery St., 40th Floor San Francisco, California 94104 (415) 525-8890 (Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

February 29, 2024

(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(g), check the following box \square .

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.

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*).

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.

NAME OF REPO	DRTING PERSON				
BIOTECH	NOLOGY VALUE FUND L.P.				
	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) 🛛				
	(b) 🗆				
SEC USE ONLY	C USE ONLY				
SOURCE OF FU	NDS				
WC					
CHECK BOX IF 2(e)	DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OF				
CITIZENSHIP O	R PLACE OF ORGANIZATION				
DEL AWAR	F				
7	SOLE VOTING POWER				
8	SHARED VOTING POWER				
	11.075 (70)				
9					
-					
10					
10					
AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON					
CHECK BOX IF	THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES				
PERCENT OF C	LASS REPRESENTED BY AMOUNT IN ROW (11)				
17.9%					
	RTING PERSON				
PN					
	BIOTECHI CHECK THE AF SEC USE ONLY SOURCE OF FU WC CHECK BOX IF 2(e) CITIZENSHIP O DELAWAF 7 8 9 9 10 AGGREGATE A 11,265,678 CHECK BOX IF PERCENT OF C 17.9% TYPE OF REPO	SEC USE ONLY SEC USE ONLY SOURCE OF FUNDS WC CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) CITIZENSHIP OR PLACE OF ORGANIZATION DELAWARE 7 SOLE VOTING POWER -0- 8 SHARED VOTING POWER -0- 8 SOLE DISPOSITIVE POWER -0- 10 SHARED DISPOSITIVE POWER -0- 10 SHARED DISPOSITIVE POWER 11,265,678 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 11,265,678 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 17.9% TYPE OF REPORTING PERSON			

1				
1	NAME OF REPC	DRTING PERSON		
	BVF I GP I	LC		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a)			
			(b) 🗆	
3	SEC USE ONLY			
4	SOURCE OF FU	NDS		
5	AF CHECK BOX IE	DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR	<u> </u>	
5	2(e)	DISCLOSORE OF LEGAL I ROCEEDINGS IS REQUIRED FORSOANT TO THEM 2(u) OR		
	<u>\`</u> /			
6	CITIZENSHIP O	R PLACE OF ORGANIZATION		
	DELAWAR	E		
NUMBER OF	7	SOLE VOTING POWER		
SHARES				
BENEFICIALLY OWNED BY	8	- 0 - SHARED VOTING POWER		
EACH	0	SHARED VOTING FOWER		
REPORTING		11,265,678		
PERSON WITH	9	SOLE DISPOSITIVE POWER		
		- 0 -		
	10	SHARED DISPOSITIVE POWER		
11				
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON			
	11,265,678			
12		THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES		
13	PERCENT OF C	LASS REPRESENTED BY AMOUNT IN ROW (11)		
15				
	17.9%			
14	TYPE OF REPOR	RTING PERSON		
	00			
	00			

	+			
1	NAME OF REPORT	ING PERSON		
	DIOTROTO			
		LOGY VALUE FUND II, L.P.		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a)			
			(b) 🗆	
3	SEC LISE ONLY	SEC USE ONLY		
3	SEC USE ONLY			
4	SOURCE OF FUND	S		
	SOURCE OF FORD	5		
	WC			
5	CHECK BOX IF DIS	SCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR		
	2(e)			
6	CITIZENSHIP OR P	LACE OF ORGANIZATION		
	DELAWARE			
NUMBER OF	7	SOLE VOTING POWER		
SHARES BENEFICIALLY				
OWNED BY	8	- 0 - SHARED VOTING POWER		
EACH	8	SHARED VOTING POWER		
REPORTING		9,005,700		
PERSON WITH	9	SOLE DISPOSITIVE POWER		
	,			
		- 0 -		
	10	SHARED DISPOSITIVE POWER		
		9,005,700		
11	AGGREGATE AMC	UNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		
12	9,005,700			
12	CHECK BOX IF TH	E AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES		
13	PERCENT OF CLAS	SS REPRESENTED BY AMOUNT IN ROW (11)		
15	I EXCENT OF CLA	$\frac{1}{10000000000000000000000000000000000$		
	14.3%			
14	TYPE OF REPORTI	NG PERSON		
	PN			
	*			

1	NAME OF REPORT	ING PERSON		
	BVF II GP LL			
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a)			
			(b) 🗆	
3	CECTICE ONLY	SEC USE ONLY		
3	SEC USE ONLY			
4	SOURCE OF FUND	S		
	SOURCE OF FORD	5		
	AF			
5		SCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR		
	2(e)			
6	CITIZENSHIP OR P	LACE OF ORGANIZATION		
	DELAWARE			
NUMBER OF	7	SOLE VOTING POWER		
SHARES BENEFICIALLY				
OWNED BY	8	- 0 - SHARED VOTING POWER		
EACH	0	SHAKED VOTING POWER		
REPORTING		9,005,700		
PERSON WITH	9	SOLE DISPOSITIVE POWER		
	,			
		- 0 -		
	10	SHARED DISPOSITIVE POWER		
		9,005,700		
11	AGGREGATE AMO	UNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		
	0.005.500			
10	9,005,700			
12	CHECK BOX IF TH	E AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES		
13	PERCENT OF CLAS	SS REPRESENTED BY AMOUNT IN ROW (11)		
15	I ERCENT OF CLAS	$\frac{1}{10000000000000000000000000000000000$		
	14.3%			
14	TYPE OF REPORTI	NG PERSON		
	00			
·	1			

·	.			
1	NAME OF REPOR	ATING PERSON		
	DIOTECIDI			
2		DLOGY VALUE TRADING FUND OS, L.P.	(a) 🗵	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP			
			(b) 🗆	
3	SEC USE ONLY			
5	SEC OSE ONEI			
4	SOURCE OF FUN	DS		
-	WC			
5		ISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR		
	2(e)			
6	CITIZENSHIP OR	PLACE OF ORGANIZATION		
-				
	CAYMAN IS			
NUMBER OF	7	SOLE VOTING POWER		
SHARES				
BENEFICIALLY OWNED BY	8	- 0 - SHARED VOTING POWER		
EACH	8	SHARED VOTING POWER		
REPORTING		1,420,317		
PERSON WITH	9	SOLE DISPOSITIVE POWER		
		- 0 -		
	10	SHARED DISPOSITIVE POWER		
		1 400 217		
11	AGGREGATE AM	1,420,317 OUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		
11				
	1,420,317			
12		HE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES		
13	PERCENT OF CL	ASS REPRESENTED BY AMOUNT IN ROW (11)		
	2.3%			
14	TYPE OF REPORT	FING PERSON		
	PN			
	*			

1	NAME OF REPOR	RTING PERSON		
		ERS OS LTD.		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP			
			(b) 🗆	
3	SEC USE ONLY			
3	SEC USE ONLY			
4	SOURCE OF FUN	DS		
	AF			
5	CHECK BOX IF D	DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR		
	2(e)			
6	CITIZENSHIP OR	PLACE OF ORGANIZATION		
	CAYMAN IS			
NUMBER OF	7	SOLE VOTING POWER		
SHARES	/	SOLE VOTING FOWER		
BENEFICIALLY		- 0 -		
OWNED BY	8	SHARED VOTING POWER		
EACH				
REPORTING		1,420,317		
PERSON WITH	9	SOLE DISPOSITIVE POWER		
	10	SHARED DISPOSITIVE POWER		
		1,420,317		
11	AGGREGATE AM	IOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		
**				
	1,420,317			
12		HE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES		
13	PERCENT OF CL	ASS REPRESENTED BY AMOUNT IN ROW (11)		
	2.20/			
14	2.3% TYPE OF REPORT			
14	I TPE OF KEPOR	I IINU PERSUN		
	СО			
L				

	+			
1	NAME OF REPORT	ING PERSON		
	BVF GP HOLI			
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a)			
			(b) 🗆	
3	SEC LISE ONLY	SEC USE ONLY		
5	SEC USE ONLI			
4	SOURCE OF FUND	S	<u>.</u>	
	AF			
5		SCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR		
	2(e)			
6	CITIZENSUIDODD	LACE OF ORGANIZATION		
0	CITIZENSHIF OK F	LACE OF ORGANIZATION		
	DELAWARE			
NUMBER OF	7	SOLE VOTING POWER		
SHARES				
BENEFICIALLY		- 0 -		
OWNED BY	8	SHARED VOTING POWER		
EACH				
REPORTING		20,271,378		
PERSON WITH	9	SOLE DISPOSITIVE POWER		
		- 0 -		
	10	SHARED DISPOSITIVE POWER		
	10	SHARED DISTOSTITVE FOWER		
		20,271,378		
11	AGGREGATE AMC	UNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		
	20,271,378			
12	CHECK BOX IF TH	E AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES		
13	DEDCENT OF CLAS	SS REPRESENTED BY AMOUNT IN ROW (11)		
15	FERCENT OF CLAS	SS REFRESENTED DI ANIOUNT IN KOW (11)		
	32.2%			
14	TYPE OF REPORTI	NG PERSON		
	00			

	i		
1	NAME OF REPOR	RTING PERSON	
	BVF PARTN		(a) 🗵
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP		
			(b) 🗆
3	SEC USE ONLY		
3	SEC USE ONLY		
4	SOURCE OF FUN	DS	
	AF		
5	CHECK BOX IF I	DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR	
	2(e)		
6	CITIZENSHIP OR	PLACE OF ORGANIZATION	
	DELAWARE		
NUMBER OF	7	SOLE VOTING POWER	
SHARES	/	SOLE VOTINGTOWER	
BENEFICIALLY		- 0 -	
OWNED BY	8	SHARED VOTING POWER	
EACH			
REPORTING		21,751,284	
PERSON WITH	9	SOLE DISPOSITIVE POWER	
	10	- 0 - SHARED DISPOSITIVE POWER	
	10	SHARED DISPOSITIVE POWER	
		21,751,284	
11	AGGREGATE AM	IOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	21,751,284		
12	CHECK BOX IF T	HE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES	
12			
13	PERCENT OF CL	ASS REPRESENTED BY AMOUNT IN ROW (11)	
	34.6%		
14	34.6% TYPE OF REPOR	TING PERSON	
14			
	PN, IA		
L	,		

	1			
1	NAME OF REPO	RTING PERSON		
	BVF INC.		(a) 🗵	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP			
			(b) 🗆	
3	SEC USE ONLY	SEC USE ONLY		
4	SOURCE OF FUI		-	
4	SOURCE OF FUI	NDS		
	AF			
5		DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OF	<u> </u>	
5	2(e)	DISCLOSURE OF LEGAL FROCEEDINGS IS REQUIRED FORSUANT TO THEM 2(a) OF		
	2(0)			
6	CITIZENSHIP O	R PLACE OF ORGANIZATION		
Ŭ				
	DELAWAR	Е		
NUMBER OF	7	SOLE VOTING POWER		
SHARES				
BENEFICIALLY		- 0 -		
OWNED BY	8	SHARED VOTING POWER		
EACH				
REPORTING		21,751,284		
PERSON WITH	9	SOLE DISPOSITIVE POWER		
		- 0 -		
	10	SHARED DISPOSITIVE POWER		
		21,751,284		
11	AGGREGATE A	MOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		
	21 751 204			
12	21,751,284	THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES		
12	CHECK BUX IF	THE AUUKEDATE AMOUNT IN KOW (11) EXCLUDES CERTAIN SHAKES		
13	PERCENT OF CI	LASS REPRESENTED BY AMOUNT IN ROW (11)		
15				
	34.6%			
14	TYPE OF REPOR	RTING PERSON		
1,				
	СО			
	- ~			

1	NAME OF REPO	RTING PERSON			
	MARK N. I				
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP				
			(b) 🗆		
	GEG LIGE ON UN				
3	SEC USE ONLY				
4	SOURCE OF FUR	SOURCE OF FUNDS			
4	SOURCE OF FUINDS				
	AF				
5		DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR			
-	2(e)				
6	CITIZENSHIP OI	R PLACE OF ORGANIZATION			
	USA				
NUMBER OF	7	SOLE VOTING POWER			
SHARES					
BENEFICIALLY OWNED BY	0	- 0 - SHARED VOTING POWER			
EACH	8	SHARED VOTING POWER			
REPORTING		21,751,284			
PERSON WITH	9	SOLE DISPOSITIVE POWER			
	,	SOLE DISCOSITIVE FOWER			
		- 0 -			
	10	SHARED DISPOSITIVE POWER			
		21,751,284			
11	AGGREGATE AN	MOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON			
	_				
	21,751,284				
12	CHECK BOX IF	THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES			
13	DED CENT OF C	ASS DEDDESENTED DV AMOUNT IN DOW (11)			
15	PERCENT OF CI	LASS REPRESENTED BY AMOUNT IN ROW (11)			
	34.6%				
14	TYPE OF REPOR	RTING PERSON			
	IN				
L	<u>!</u>				

1	+		
1	NAME OF REPOR	RTING PERSON	
	SPIKE LOY		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP		
			(b) 🗆
3	SEC USE ONLY		
4	SOURCE OF FUN		
4	SOURCE OF FUN	03	
5	CHECK BOX IF I	DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR	
	2(e)	······································	_
6	CITIZENSHIP OR	PLACE OF ORGANIZATION	
	USA		
NUMBER OF	7	SOLE VOTING POWER	
SHARES			
BENEFICIALLY		- 0 -	
OWNED BY	8	SHARED VOTING POWER	
EACH			
REPORTING PERSON WITH	0	- 0 - SOLE DISPOSITIVE POWER	
PERSON WITH	9	SOLE DISPOSITIVE POWER	
		- 0 -	
	10	SHARED DISPOSITIVE POWER	
	10	SIMALD DISTOSITIVE FOWER	
		- 0 -	
11	AGGREGATE AM	IOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	- 0 -		
12	CHECK BOX IF 7	THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES	
13	PERCENT OF CL	ASS REPRESENTED BY AMOUNT IN ROW (11)	
	00/		
1.4	0% TYPE OF REPOR	TIMO DEDCOM	
14	I TPE OF REPOR	HING PEKSUN	
	IN		
L	111		

Explanatory Note: The following constitutes Amendment No. 2 to the Schedule 13D filed by the undersigned ("Amendment No. 2"). This Amendment No. 2 amends the Schedule 13D as specifically set forth herein and is being filed due to a change in the percentage of the outstanding number of Shares owned by the Reporting Persons solely due to an increase in the number of Shares outstanding.

Item 5. <u>Interest in Securities of the Issuer</u>.

Items 5(a) and (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 62,874,637 Shares outstanding, which is the total number of Shares outstanding as reported in the Issuer's Annual Report on Form 10-K filed with the Securities and Exchange Commission on February 29, 2024.

As of the date hereof, (i) BVF beneficially owned 11,265,678 Shares, representing percentage ownership of approximately 17.9% of the Shares outstanding, (ii) BVF2 beneficially owned 9,005,700 Shares, representing percentage ownership of approximately 14.3% of the Shares outstanding, (iii) Trading Fund OS beneficially owned 1,420,317 Shares, representing percentage ownership of approximately 2.3% of the Shares outstanding, and (iv) 59,589 Shares were held in the Partners Managed Account, representing percentage ownership of less than 1% of the Shares outstanding.

BVF GP, as the general partner of BVF, may be deemed to beneficially own the 11,265,678 Shares beneficially owned by BVF, representing percentage ownership of approximately 17.9% of the Shares outstanding.

BVF2 GP, as the general partner of BVF2, may be deemed to beneficially own the 9,005,700 Shares beneficially owned by BVF2, representing percentage ownership of approximately 14.3% of the Shares outstanding.

Partners OS, as the general partner of Trading Fund OS, may be deemed to beneficially own the 1,420,317 Shares beneficially owned by Trading Fund OS, representing percentage ownership of approximately 2.3% of the Shares outstanding.

BVF GPH, as the sole member of each of BVF GP and BVF2 GP, may be deemed to beneficially own the 20,271,378 Shares beneficially owned in the aggregate by BVF and BVF2, representing percentage ownership of approximately 32.2% of the Shares outstanding.

Partners, as the investment manager of BVF, BVF2, Trading Fund OS and the Partners Managed Account and the sole member of Partners OS, may be deemed to beneficially own the 21,751,284 Shares beneficially owned in the aggregate by BVF, BVF2 and Trading Fund OS and held in the Partners Managed Account, representing percentage ownership of approximately 34.6% of the Shares outstanding.

BVF Inc., as the general partner of Partners, may be deemed to beneficially own the 21,751,284 Shares beneficially owned by Partners, representing percentage ownership of approximately 34.6% of the Shares outstanding.

Mr. Lampert, as a director and officer of BVF Inc., may be deemed to beneficially own the 21,751,284 Shares beneficially owned by BVF Inc., representing percentage ownership of approximately 34.6% of the Shares outstanding.

As of the date hereof, Mr. Loy does not beneficially own any Shares of the Issuer.

(c) None of the Reporting Persons have entered into any transactions in the Shares during the past sixty days.

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: March 5, 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

/s/ Spike Loy SPIKE LOY