#### 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. 6)<sup>1</sup>

Molecular Templates, Inc. (Name of Issuer)

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

608550208

(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:

- $\square \quad \text{Rule 13d-1(b)}$
- $\boxtimes$  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*).

CUSIP No. 608550208

1       NAME OF REPORTING PERSON         Biotechnology Value Fund, L.P.       (a) Z         2       CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP       (a) Z         3       SEC USE ONLY       (b)		3		
2       CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP       (a) (b) (c)         3       SEC USE ONLY       (b) (c)         4       CITIZENSHIP OR PLACE OF ORGANIZATION       (c)         0       Delaware       (c)         NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH       5       SOLE VOTING POWER         0       0       (c)         289,378 (1)       (c)       (c)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON       (c)         289,378 (1)       (c)       (c)       (c)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES       (c) <td< td=""><td>1</td><td>NAME OF REPORTE</td><td>NG PERSON</td><td></td></td<>	1	NAME OF REPORTE	NG PERSON	
2       CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP       (a) (b) (c)         3       SEC USE ONLY       (b) (c)         4       CITIZENSHIP OR PLACE OF ORGANIZATION       (c)         0       Delaware       (c)         NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH       5       SOLE VOTING POWER         0       0       (c)         289,378 (1)       (c)       (c)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON       (c)         289,378 (1)       (c)       (c)       (c)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES       (c) <td< td=""><td></td><td></td><td></td><td></td></td<>				
3       SEC USE ONLY         4       CITIZENSHIP OR PLACE OF ORGANIZATION         Delaware       0         NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH       5       SOLE VOTING POWER         0       0       0         0       0       0         0       0       0         0       0       0         0       0       0         0       0       0         0       0       0         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES       0         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)       0		Biotechnology	Value Fund, L.P.	
3       SEC USE ONLY         4       CITIZENSHIP OR PLACE OF ORGANIZATION         Delaware       Delaware         NUMBER OF SHARES BENEFICIALLY       5         OWNED BY EACH REPORTING PERSON WITH       5         7       SOLE VOTING POWER         0       0         0       289,378 (1)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)	2	CHECK THE APPRO	PRIATE BOX IF A MEMBER OF A GROUP	
3       SEC USE ONLY         4       CITIZENSHIP OR PLACE OF ORGANIZATION         Delaware       Delaware         NUMBER OF SHARES BENEFICIALLY       5         OWNED BY EACH REPORTING PERSON WITH       5         7       SOLE VOTING POWER         0       0         0       289,378 (1)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)				(b) 🗆
4       CITIZENSHIP OR PLACE OF ORGANIZATION         Delaware       Delaware         NUMBER OF SHARES       5       SOLE VOTING POWER         BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH       6       SHARED VOTING POWER         289,378 (1)       289,378 (1)         7       SOLE DISPOSITIVE POWER         0       0         8       SHARED DISPOSITIVE POWER         289,378 (1)       289,378 (1)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)       289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES       □         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)				
Delaware         NUMBER OF SHARES       5       SOLE VOTING POWER         BENEFICIALLY       0       0         OWNED BY       6       SHARED VOTING POWER         EACH       289,378 (1)       0         PERSON WITH       7       SOLE DISPOSITIVE POWER         0       0       0         8       SHARED DISPOSITIVE POWER         0       289,378 (1)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)       289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES       □         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)	3	SEC USE ONLY		
Delaware         NUMBER OF SHARES       5       SOLE VOTING POWER         BENEFICIALLY       0       0         OWNED BY       6       SHARED VOTING POWER         EACH       289,378 (1)       0         PERSON WITH       7       SOLE DISPOSITIVE POWER         0       0       0         8       SHARED DISPOSITIVE POWER         0       289,378 (1)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)       289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES       □         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)				
Delaware         NUMBER OF SHARES       5       SOLE VOTING POWER         BENEFICIALLY       0       0         OWNED BY       6       SHARED VOTING POWER         EACH       289,378 (1)       0         PERSON WITH       7       SOLE DISPOSITIVE POWER         0       0       0         8       SHARED DISPOSITIVE POWER         0       289,378 (1)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)       289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES       □         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)				
NUMBER OF SHARES BENEFICIALLY       5       SOLE VOTING POWER         0       0         OWNED BY EACH REPORTING       6       SHARED VOTING POWER         0       289,378 (1)         PERSON WITH       7       SOLE DISPOSITIVE POWER         0       0         0       0         0       0         0       0         0       0         0       0         0       0         0       0         0       0         0       0         0       0         0       289,378 (1)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)       289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)	4	CITIZENSHIP OR PL	ACE OF ORGANIZATION	
NUMBER OF SHARES BENEFICIALLY       5       SOLE VOTING POWER         0       0         OWNED BY EACH REPORTING       6       SHARED VOTING POWER         0       289,378 (1)         PERSON WITH       7       SOLE DISPOSITIVE POWER         0       0         0       0         0       0         0       0         0       0         0       0         0       0         0       0         0       0         0       0         0       0         0       289,378 (1)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)       289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)				
SHARES       0         BENEFICIALLY       0         OWNED BY       6         SHARED VOTING POWER         EACH         REPORTING         PERSON WITH         7         SOLE DISPOSITIVE POWER         0         0         8         SHARED DISPOSITIVE POWER         289,378 (1)         9         AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)         10         CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES         11         PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)		Delaware		
BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH       6       SHARED VOTING POWER         289,378 (1)       289,378 (1)         0       0         10       0         289,378 (1)       289,378 (1)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)       289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES       1         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)	NUMBER OF	5	SOLE VOTING POWER	
OWNED BY EACH REPORTING       6       SHARED VOTING POWER 289,378 (1)         PERSON WITH       7       SOLE DISPOSITIVE POWER 0         0       0         8       SHARED DISPOSITIVE POWER 289,378 (1)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)	SHARES			
EACH REPORTING PERSON WITH 7 SOLE DISPOSITIVE POWER 0 8 SHARED DISPOSITIVE POWER 289,378 (1) 9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 289,378 (1) 10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES 11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)	BENEFICIALLY		0	
REPORTING       289,378 (1)         PERSON WITH       7       SOLE DISPOSITIVE POWER         0       0         8       SHARED DISPOSITIVE POWER         289,378 (1)       289,378 (1)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)       289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)	OWNED BY	6	SHARED VOTING POWER	
PERSON WITH       7       SOLE DISPOSITIVE POWER         0       0         8       SHARED DISPOSITIVE POWER         289,378 (1)       289,378 (1)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)       289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)	EACH			
0       8       289,378 (1)       9     AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON       289,378 (1)       10     CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES       11     PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)	REPORTING		289,378 (1)	
8       SHARED DISPOSITIVE POWER         289,378 (1)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)	PERSON WITH	7	SOLE DISPOSITIVE POWER	
8       SHARED DISPOSITIVE POWER         289,378 (1)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)				
289,378 (1)         9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)			0	
9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)       289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)		8	SHARED DISPOSITIVE POWER	
9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)       289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)				
9       AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON         289,378 (1)       289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)				
289,378 (1)         10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)				
10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES       □         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)	9	AGGREGATE AMOU	JNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
10       CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES       □         11       PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)				
11     PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)				
	10	CHECK BOX IF THE	AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
5.4% (1)	11	PERCENT OF CLASS	S REPRESENTED BY AMOUNT IN ROW (9)	
5.4% (1)				
		5.4% (1)		

12	TYPE OF REPORTING PERSON
	PN

(1) Includes 5,388 Shares (as defined below) currently issuable upon the conversion of certain Series A Convertible Preferred (as defined below).

## CUSIP No. 608550208

1	NAME OF REPORT	TING PERSON		
	BVF I GP LL			
2	CHECK THE APPR	OPRIATE BOX IF A MEMBER OF A GROUP	(a) 🗵	
			(b) 🗆	
3	SEC USE ONLY			
4	CITIZENSHIP OR I	PLACE OF ORGANIZATION		
	Delaware			
NUMBER OF	5	SOLE VOTING POWER		
SHARES	5	SOLE VOTINOTOWER		
BENEFICIALLY		0		
OWNED BY	6	SHARED VOTING POWER		
EACH				
REPORTING		289,378 (1)		
PERSON WITH	7	SOLE DISPOSITIVE POWER		
		0		
	8	SHARED DISPOSITIVE POWER		
		200.270 (1)		
9	ACCDECATE AM	289,378 (1) DUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		
9	AUUKEUATE AMU	JUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		
	289,378 (1)			
10		E AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES		
10	CILCUIDON II II			
11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)				
Ï				
	5.4% (1)			
12	TYPE OF REPORT	NG PERSON		
	00			

(1) Includes 5,388 Shares currently issuable upon the conversion of certain Series A Convertible Preferred.

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## CUSIP No. 608550208

1	NAME OF REPORT	TING PERSON	
	Biotechnolog	y Value Fund II, L.P.	
2	CHECK THE APPR	OPRIATE BOX IF A MEMBER OF A GROUP	(a) ⊠ (b) □
3	3 SEC USE ONLY		
4	CITIZENSHIP OR I	PLACE OF ORGANIZATION	
	Delaware		
NUMBER OF SHARES	5	SOLE VOTING POWER	
BENEFICIALLY		0	
OWNED BY EACH	6	SHARED VOTING POWER	
REPORTING		215,721	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
		0	
	8	SHARED DISPOSITIVE POWER	
		215,721	
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		
	215,721		
10	CHECK BOX IF TH	IE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	

	11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)		
I		4.0%		
	12	TYPE OF REPORTING PERSON		
		PN		

## CUSIP No. 608550208

1	NAME OF REPOR	RTING PERSON	
	BVF II GP		
2		ROPRIATE BOX IF A MEMBER OF A GROUP	(a) 🗵
			(b) 🗆
3	SEC USE ONLY		
4	CITIZENSHIP OR	PLACE OF ORGANIZATION	
	Delaware		
NUMBER OF SHARES	5	SOLE VOTING POWER	
BENEFICIALLY		0	
OWNED BY	6	SHARED VOTING POWER	
EACH REPORTING		215,721	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
	8	0 SHARED DISPOSITIVE POWER	
	Ũ		
		215,721	
9	AGGREGATE AN	10UNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	215,721		
10	CHECK BOX IF T	HE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)			
	4.0%		
12	4.0% TYPE OF REPOR	TING PERSON	
12			
	00		

## CUSIP No. 608550208

1	NAME OF REPORTI	NG PERSON	
		Value Trading Fund OS LP	
2	CHECK THE APPRO	PRIATE BOX IF A MEMBER OF A GROUP	(a) 🖂
			(b) 🗆
3	SEC USE ONLY		
-			
4	CITIZENSHIP OR PL	ACE OF ORGANIZATION	
	Cayman Island	8	
NUMBER OF	5	SOLE VOTING POWER	
SHARES			
BENEFICIALLY OWNED BY	C.		
EACH	6	SHARED VOTING POWER	
REPORTING		24,806	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
		0	
	8	SHARED DISPOSITIVE POWER	
		24,806	
9	AGGREGATE AMO	JNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	24,806		
10	CHECK BOX IF THE	AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	

ļ		
Ĩ	11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)
İ		Less than 1%
ſ	12	TYPE OF REPORTING PERSON
		PN

## 6

## CUSIP No. 608550208

1	NAME OF REPOR	TING PERSON		
	BVF Partner			
2		ROPRIATE BOX IF A MEMBER OF A GROUP	(a) 🗵	
2	CHECK THE AFFI	KOFKIATE BOA IF A MEMBER OF A OKOUF	(a) ⊠ (b) □	
3	SEC USE ONLY			
4	CITIZENSHIP OR	PLACE OF ORGANIZATION		
NUMBER OF	Cayman Isla	nds SOLE VOTING POWER		
NUMBER OF SHARES	5	SOLE VOTING POWER		
BENEFICIALLY		0		
OWNED BY	6	SHARED VOTING POWER		
EACH	-			
REPORTING		24,806		
PERSON WITH	7	SOLE DISPOSITIVE POWER		
	8	0 SHARED DISPOSITIVE POWER		
	8	SHARED DISPOSITIVE POWER		
		24.806		
9	AGGREGATE AM	IOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		
	24,806			
10	CHECK BOX IF T	HE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES		
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)			
11 TERCENT OF CLASS REFRESENTED DT AMOUNT IN ROW (9)				
	Less than 1%	6		
12	TYPE OF REPORT	FING PERSON		
	CO			

## CUSIP No. 608550208

1	NAME OF REPOR	NAME OF REPORTING PERSON		
	BVF GP Holdings LLC			
2		ROPRIATE BOX IF A MEMBER OF A GROUP	(a) ⊠ (b) □	
3	SEC USE ONLY			
4	CITIZENSHIP OR	PLACE OF ORGANIZATION		
	Delaware			
NUMBER OF	5	SOLE VOTING POWER		
SHARES BENEFICIALLY		0		
OWNED BY	6	SHARED VOTING POWER		
EACH REPORTING		505,099 (1)		
PERSON WITH	7	SOLE DISPOSITIVE POWER	-	
	0			
	8	SHARED DISPOSITIVE POWER		
		505,099 (1)		
9	AGGREGATE AM	OUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		

	505,099 (1)	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)	
	9.4% (1)	
12	TYPE OF REPORTING PERSON	
	00	

(1) Includes 5,388 Shares currently issuable upon the conversion of certain Series A Convertible Preferred.

CUSIP No. 608550208

	ir			
1	NAME OF REPOR	TING PERSON		
		T D		
2	BVF Partner	'S L.P. ROPRIATE BOX IF A MEMBER OF A GROUP	(-) ¥	
2	CHECK THE APPL	KUPKIATE BOX IF A MEMBER OF A GROUP	$\begin{array}{c} (a) \boxtimes \\ (b) \square \end{array}$	
			(0)	
3	SEC USE ONLY			
4	CITIZENSHIP OR	PLACE OF ORGANIZATION		
	D I			
NUMBER OF	Delaware 5	SOLE VOTING POWER		
SHARES	5	SOLE VOTING POWER		
BENEFICIALLY		0		
OWNED BY	6	SHARED VOTING POWER		
EACH				
REPORTING		537,426 (1)		
PERSON WITH	7	SOLE DISPOSITIVE POWER		
		0		
	8	SHARED DISPOSITIVE POWER		
	0	Shirked Dist Ostitive to werk		
		537,426 (1)		
9	AGGREGATE AM	OUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		
10	537,426 (1)	HE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES		
10	CHECK BOX IF 1	HE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES		
11	PERCENT OF CLA	RCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)		
	9.99% (1)			
12	TYPE OF REPORT	TING PERSON		
	PN, IA			
	F 1N, 1/A			

(1) Includes 5,388 Shares currently issuable upon the conversion of certain Series A Convertible Preferred.

CUSIP No. 608550208

1	NAME OF REPORT	NG PERSON	
	BVF Inc.		
2	CHECK THE APPRO	PRIATE BOX IF A MEMBER OF A GROUP	(a) ⊠ (b) □
3	SEC USE ONLY		
4	CITIZENSHIP OR PI Delaware	LACE OF ORGANIZATION	
NUMBER OF SHARES BENEFICIALLY	5	SOLE VOTING POWER	
OWNED BY EACH REPORTING	6	SHARED VOTING POWER 537,426 (1)	
PERSON WITH	7	SOLE DISPOSITIVE POWER 0	
	8	SHARED DISPOSITIVE POWER	

		537,426 (1)		
ľ	9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		
		537,426 (1)		
ſ	10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES		
	11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)		
		9.99% (1)		
ļ	12	TYPE OF REPORTING PERSON		
		СО		

(1) Includes 5,388 Shares currently issuable upon the conversion of certain Series A Convertible Preferred.

CUSIP No. 608550208

1 NAME OF REPORTING PERSON Mark N. Lampert (a) 🗵 2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) 🗆 SEC USE ONLY 3 CITIZENSHIP OR PLACE OF ORGANIZATION 4 United States NUMBER OF SOLE VOTING POWER 5 SHARES BENEFICIALLY 0 SHARED VOTING POWER OWNED BY 6 EACH REPORTING 537,426(1) PERSON WITH SOLE DISPOSITIVE POWER 7 0 SHARED DISPOSITIVE POWER 8 537,426 (1) AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 9 537,426(1) 10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 11 9.99% (1) TYPE OF REPORTING PERSON 12 IN

(1) Includes 5,388 Shares currently issuable upon the conversion of certain Series A Convertible Preferred.

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CUSIP No. 608550208 Item 1(a). Name of Issuer: Molecular Templates, Inc., a Delaware corporation (the "Issuer"). Item 1(b). Address of Issuer's Principal Executive Offices: 9301 Amberglen Blvd., Suite 100 Austin, Texas 78729 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 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

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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:

608550208

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:

	$/\mathbf{x}/$	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. Ownership

#### (a) Amount beneficially owned:

As of the close of business on December 31, 2023, the Reporting Persons held an aggregate of 250 shares of Series A Convertible Preferred Stock (the "Series A Convertible Preferred") convertible for an aggregate of 16,667 Shares. The Series A Convertible Preferred 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 (the "Exchange Act"), more than 9.99% of the number of Shares then issued and outstanding (the "Series A Blocker"). As of the close of business on December 31, 2023, the Series A Blocker limits the conversion of the Series A Convertible Preferred held by the Reporting Persons to 5,388 Shares of the 16,667 Shares underlying the Series A Convertible Preferred.

As of the close of business on December 31, 2023, the Reporting Persons and certain Partners managed accounts (the "Partners Managed Accounts") held an aggregate of 24,134 warrants (the "Warrants") exercisable for an aggregate of 24,134 Shares. The Warrants have an exercise price of \$102.6345 per Share and expire on August 1, 2024. The Warrants are only exercisable to the extent that the holder, together with its affiliates and any other person or entity acting as a group, would not beneficially own more than 4.99% of the outstanding Shares after giving effect to such exercise, as such percentage ownership is determined in accordance with the terms of the Warrants (the "Beneficial Ownership Limitation"). As of December 31, 2023, the Beneficial Ownership Limitation prohibits the exercise of all of the Warrants held by the Reporting Persons and the Partners Managed Accounts.

As of the close of business on December 31, 2023, the Reporting Persons and the Partners Managed Accounts held an aggregate of 1,222,100 Pre-Funded Warrants (the "Pre-Funded Warrants") exercisable for an aggregate of 1,222,100 Shares. The Pre-Funded Warrants are immediately exercisable at an exercise price of \$0.015 per Share and have no expiration date. The Pre-Funded Warrants are only exercisable to the extent that the holder thereof, together with its Attribution Parties (as defined in the Form of Pre-Funded Warrant to Purchase Common Stock), would not beneficially own in excess of 9.99% of the outstanding Shares after giving effect to such exercise (the "Pre-Funded Warrants Blocker"). As of December 31, 2023, the Pre-Funded Warrants Blocker prohibits the exercise of all of the Pre-Funded Warrants held by the Reporting Persons and a certain Partners Managed Account.

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As of the close of business on December 31, 2023, (i) BVF beneficially owned 289,378 Shares, including 5,388 Shares issuable upon the conversion of certain Series A Convertible Preferred and excluding (a) 3,145 Shares issuable upon the conversion of certain Series A Convertible Preferred held by it, (b) 11,233 Shares underlying certain Warrants held by it, and (c) 651,521 Shares underlying certain Pre-Funded Warrants held by it, (ii) BVF2 beneficially owned 215,721 Shares, excluding (a) 6,933 Shares underlying certain Pre-Funded Warrants held by it, (b) 7,235 Shares underlying certain Warrants held by it, and (c) 495,905 Shares underlying certain Pre-Funded Warrants held by it, (b) 7,235 Shares underlying certain Warrants held by it, and (c) 495,905 Shares underlying certain Pre-Funded Warrants held by it, and (iii) Trading Fund OS beneficially owned 24,806 Shares, excluding (a) 1,200 Shares underlying certain Pre-Funded Warrants held by it, (b) 2,012 Shares underlying certain Warrants held by it, and (c) 57,921 Shares underlying certain Pre-Funded Warrants held by it.

BVF GP, as the general partner of BVF, may be deemed to beneficially own the 289,378 Shares beneficially owned by BVF.

BVF2 GP, as the general partner of BVF2, may be deemed to beneficially own the 215,721 Shares beneficially owned by BVF2.

Partners OS, as the general partner of Trading Fund OS, may be deemed to beneficially own the 24,806 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 505,099 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 537,426 Shares beneficially owned in the aggregate by BVF, BVF2 and Trading Fund OS and held in the Partners Managed Accounts, including 7,521 Shares held in the Partners Managed Accounts and excluding (a) 3,654 Shares underlying certain Warrants held in the Partners Managed Accounts and (b) 16,753 Shares underlying certain Pre-Funded Warrants held in the Partners Managed Accounts.

BVF Inc., as the general partner of Partners, may be deemed to beneficially own the 537,426 Shares beneficially owned by Partners.

Mr. Lampert, as a director and officer of BVF Inc., may be deemed to beneficially own the 537,426 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 BVF2. Partners OS 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 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.

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(b) Percent of class:

The following percentages are based upon a denominator that is the sum of (i) 5,374,268 Shares outstanding as of November 6, 2023, as disclosed by the Issuer in its Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 13, 2023, and (ii) 5,388 Shares issuable upon the conversion of certain of the Series A Convertible Preferred held by the Reporting Persons, as applicable.

As of the close of business on December 31, 2023, (i) BVF beneficially owned approximately 5.4% of the outstanding Shares, (ii) BVF2 beneficially owned approximately 4.0% 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 5.4% of the outstanding Shares, (v) BVF2 GP may be deemed to beneficially own approximately 4.0% of the outstanding Shares, (v) BVF2 GP may be deemed to beneficially own approximately 4.0% of the outstanding Shares, (v) BVF2 GP may be deemed to beneficially own approximately 4.0% of the outstanding Shares, (v) BVF2 GP may be deemed to beneficially own approximately 9.4% 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 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.

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# 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 Amendment No. 2 to the Schedule 13G filed with the Securities and Exchange Commission on February 14, 2020.

#### 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.

CUSIP No. 608550208

### SIGNATURE

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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

BIOTECHNOLOGY VALUE TRADING FUND OS LP

- By: BVF Partners L.P., its investment manager
- By: BVF Inc., its general partner
- By: <u>/s/ Mark N. Lampert</u> 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

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

BVF PARTNERS OS LTD.

- By:BVF Partners L.P., its sole memberBy: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/ Ma	ark N. Lampert
MAR	K N. LAMPERT