United States SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

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Under the Securities Exchange Act of 1934 (Amendment No. 6)*

MOLECULAR TEMPLATES, INC.

Name of Issuer)

Common Stock (Title of Class of Securities)

> 608550208 (CUSIP Number)

December 31, 2023 (Date of Event Which Requires Filing 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)

* 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 the disclosures provided in a prior cover page.

The information required in 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.	. Names of Reporting Persons					
	BB Biotech AG					
2.						
	(a) 🗵	(b)				
3.	SEC Use	Only	y			
4.	L. Citizenship or Place of Organization					
	Switzerland					
		5.	Sole Voting Power			
Number of		-				
	Shares	6.	Shared Voting Power			
Beneficially Owned by			1,029,820			
	Each	7.	Sole Dispositive Power			
	eporting					
	Person with:		0			
	with.	8.	Shared Dispositive Power			
	1,029,820					
9.						
		_				
10	1,029,820					
10.	O. Check if the Aggregate Amount in Row (9) Excludes Certain Shares					
11.						
12	19.2%					
12.	2. Type of Reporting Person (See Instructions)					
	нс, со					
	, 50					

CUSIP No. 608550208

1.	Names of	Rep	porting Persons		
	Biotech 7	Гarg	et N.V.		
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) □ (b) □				
3.	. SEC Use Only				
4.	Citizenship or Place of Organization				
	Curaçao				
		5.	Sole Voting Power		
Number of			0		
Shares		6.	Shared Voting Power		
	Beneficially 1 220 220		1,029,820		
	wned by Each	7.	Sole Dispositive Power		
Reporting		, .			
	Person		0		
with:		8.	Shared Dispositive Power		
			1,029,820		
9.	Aggregate Amount Beneficially Owned by Each Reporting Person				
	1,029,820	1			
10.					
11.					
	19.2%				
12.	Type of F	Repo	rting Person (See Instructions)		
	CO				
-					

Item 1

- 1(a) Name of Issuer: Molecular Templates, Inc.
- 1(b) Address of Issuer's Principal Executive Offices:

9301 Amberglen Blvd, Suite 100, Austin, TX 78729

Item 2

- 2(a) Name of Person Filing: BB Biotech AG ("BB Biotech") on behalf of its wholly-owned subsidiary, Biotech Target N.V. ("Biotech Target")
 - 2(b) Address of Principal Business Office or, if none, Residence:

BB Biotech AG: Schwertstrasse 6, CH-8200 Schaffhausen, Switzerland

Biotech Target N.V.: Ara Hill Top Building, Unit A-5, Pletterijweg Oost 1, Curaçao

2(c) Citizenship: BB Biotech AG: Switzerland

Biotech Target N.V.: Curação

- 2(d) Title of Class of Securities: Common Stock, \$0.001 Par Value Per Share
- 2(e) CUSIP Number: <u>608550208</u>

Item 4. Ownership

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

- (a) Amount beneficially owned: 1,029,820
- (b) Percent of class: 19.2%
- (c) Number of shares as to which the person has:
- (i) Sole power to vote or to direct the vote0
- (ii) Shared power to vote or to direct the vote 1,029,820
- (iii) Sole power to dispose or to direct the disposition of 0
- (iv) Shared power to dispose or to direct the disposition of 1,029,820

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company or Control Person.

This statement is filed jointly by BB Biotech and Biotech Target, Biotech Target is a wholly-owned subsidiary of BB Biotech.

Item 10. Certification

By signing below I certify that, to the best of my 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, other than activities solely in connection with a nomination under §240.14a-11.

SIGNATURES

After reasonable inquiry and the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

BB Biotech AG

/s/ Martin Gubler Date: February 6, 2024 By:

Signatory Authority

Name: Martin Gubler Title: **Signatory Authority**

/s/ Ivo Betschart Date: February 6, 2024 By:

Signatory Authority

Name: Ivo Betschart Title: **Signatory Authority**

Biotech Target N.V.

Date: February 6, 2024 /s/ Jan Bootsma By:

Signatory Authority

Name: Jan Bootsma

Signatory Authority Title:

Date: February 6, 2024 By: /s/ Hugo van Neutegem

Signatory Authority Hugo van Neutegem

Name: **Signatory Authority** Title:

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Exhibit Index

Exhibit A: Joint Filing Statement by and between BB Biotech AG and Biotech Target N.V. with respect to the filing of this disclosure statement.*

^{*} Previously filed as an exhibit to BB Biotech AG and Biotech Target N.V.'s Schedule 13G filed with the Securities and Exchange Commission on January 29, 2020.