

# FORM 4

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

OMB APPROVAL	
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## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person * <b>Kim Jason S.</b>		2. Issuer Name and Ticker or Trading Symbol <b>Molecular Templates, Inc. [MTEM]</b>		5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) See Remarks	
(Last) (First) (Middle) <b>C/O MOLECULAR TEMPLATES, INC., 9301 AMBERGLEN BLVD., SUITE 100</b>		3. Date of Earliest Transaction (Month/Day/Year) <b>01/03/2020</b>			
(Street) <b>AUSTIN, TX 78729</b>		4. If Amendment, Date Original Filed (Month/Day/Year)		6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person	
(City) (State) (Zip)		<b>Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned</b>			

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock (1)	01/03/2020		M		54,136	A	\$ 0.42	54,136	D	

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Underlying Securities (Instr. 3 and 4)		8. Price of Derivative Security (Instr. 5)	9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V		Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Stock Option (right to buy) (1)	\$ 0.42	01/03/2020		M		54,136	(2)	03/09/2020	Common Stock	54,136	\$ 0	0	D	

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Kim Jason S. C/O MOLECULAR TEMPLATES, INC. 9301 AMBERGLEN BLVD., SUITE 100 AUSTIN, TX 78729			See Remarks	

## Signatures

/s/ Jason S. Kim	01/03/2010
<small>Signature of Reporting Person</small>	<small>Date</small>

## Explanation of Responses:

\* If the form is filed by more than one reporting person, see Instruction 4(b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

- (1) This report relates to the Reporting Person exercising an employee stock option to purchase 54,136 shares of common stock pursuant to a Rule 10b5-1 plan, which option expires on March 9, 2020. As a result of this exercise, the Reporting Person's stock ownership has increased by 54,136 shares.
- (2) 25% of the shares subject to the option vested on March 21, 2010 and thereafter, the remaining 75% of shares subject to the option vested pro rata on a monthly basis over 36 months.

**Remarks:**

President and Chief Operating Officer

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.

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