FORM 4

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

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

1. Name and Address of Reporting Person * Kim Jason S.			2. Issuer Name and Ticker or Trading Symbol Molecular Templates, Inc. [MTEM]							5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director X Officer (give title below) Officer (give title below) Officer (give title below) See Remarks					
(Last) (First) (Middle) C/O MOLECULAR TEMPLATES, INC., 9301 AMBERGLEN BLVD., SUITE 100			3. Date of Earliest Transaction (Month/Day/Year) 10/09/2017					X							
(Street) AUSTIN, TX 78729			4. If Amendment, Date Original Filed(Month/Day/Year)						_X_	6. Individual or Joint/Group Filing(Check Applicable Line) X_Form filed by One Reporting Person Form filed by More than One Reporting Person					
(Cit		(State)	(Zip)	Table I - Non-Derivative Securities Acq				es Acquired	luired, Disposed of, or Beneficially Owned						
1.Title of S (Instr. 3)	Title of Security 2. Transaction Date (Month/Day/Ye.		2A. Deemed Execution Date, if r) any (Month/Day/Year)		if Cod	ransactior e tr. 8)	(A) or Disposed		of (D) Own Tran				Ownership of Born: Bornect (D) O	eneficial wnership	
							code	V A	mount (A) or	Price			(I)	or Indirect (I (I) (Instr. 4)	1str. 4)
Reminder:	Report on a s	separate line for each	n class of securities b	eneficia	lly owned	directly	Per in t	rsons this fo	s who respon orm are not r ntly valid OMI	equired to	respond u				174 (9-02)
Reminder:	Report on a	separate line for each	n class of securities b	eneficia	lly owned	directly	Per in t	rsons this fo	orm are not r	equired to	respond u				174 (9-02)
1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative	3. Transaction	Table II 3A. Deemed Execution Date, if	- Deriva (e.g., p 4. Transac Code	stive Secu uts, calls, 5. No Deri Secu) Acqu or D	rities A warrar mber o	Per in t a c c c c c c c c c c c c c c c c c c	rsons this for curren Dispos 18, con the Exertation I	orm are not rently valid OMI sed of, or Beneavertible securicisable and Date	equired to 3 control n	respond uumber. ned Amount	8. Price of	9. Number o Derivative Securities Beneficially Owned	f 10. Ownership Form of Derivative Security:	11. Natur of Indirect Beneficial Ownersh (Instr. 4)
1. Title of Derivative Security	2. Conversion or Exercise Price of	3. Transaction	Table II 3A. Deemed Execution Date, if any	- Deriva (e.g., p 4. Transac Code	tive Secuuts, calls, 5. Notion Derires Secuent or Dericular (D)	rities A warrar mber of rative rities ired (A sposed	Per in t a c c c c c c c c c c c c c c c c c c	rsons this for curren Dispos 18, con the Exertation I	orm are not rently valid OMI sed of, or Beneavertible securicisable and Date	equired to 3 control n ficially Own ities) 7. Title and of Underlyi Securities	respond uumber. ned Amount	8. Price of Derivative Security	9. Number o Derivative Securifically Owned Following Reported	f 10. Ownership Form of Derivative Security: Direct (D) or Indirect	11. Nature of Indirect Beneficial Ownersh (Instr. 4)
1. Title of Derivative Security	2. Conversion or Exercise Price of Derivative	3. Transaction	Table II 3A. Deemed Execution Date, if any	- Deriva (e.g., p 4. Transac Code	titive Secu uts, calls, 5. No Derir Secu) Acqu or D (D) (Inst	rities A warrar mber o rative rities ired (A sposed	Pei in t a c c cquired, l tts, option f 6. Date Expira (Mont) of Date Exerci	rsons this for curren Dispos ns, con e Exer attion E h/Day	orm are not rently valid OMI sed of, or Beneavertible securicisable and Date //Year) Expiration	equired to 3 control n ficially Own ities) 7. Title and of Underlyi Securities	respond uumber. ned Amount	8. Price of Derivative Security	9. Number o Derivative Securities Beneficially Owned Following	f 10. Ownership Form of Derivative Security: Direct (D) or Indirect	11. Nature of Indire Beneficity Ownersh (Instr. 4)

Reporting Owners

	Relationships					
Reporting Owner Name / Address	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	10/11/2017
**Signature of Reporting Person	Date

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) 25% of the total number of shares subject to the option shall vest on October 9, 2018, and thereafter, the remaining 75% of the shares subject to the option shall vest 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.

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.