

OMB APPROVAL	
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INITIAL STATEMENT OF 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* <u>SHV Management Services, LLC</u> <hr/> (Last) (First) (Middle) C/O SANTE VENTURES 300 W 6TH STREET, SUITE 2300 <hr/> (Street) AUSTIN TX 78701 <hr/> (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) 08/01/2017	3. Issuer Name and Ticker or Trading Symbol <u>Molecular Templates, Inc. [MTEM]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) Other (specify below)	5. If Amendment, Date of Original Filed (Month/Day/Year) 08/11/2017
6. Individual or Joint/Group Filing (Check Applicable Line) <input type="checkbox"/> Form filed by One Reporting Person <input checked="" type="checkbox"/> Form filed by More than One Reporting Person			

Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
Common Stock	7,897,298	I	Held by Sante Health Ventures I, L.P. ⁽¹⁾
Common Stock	864,665	I	Held by Sante Health Ventures I Annex Fund, L.P. ⁽¹⁾

Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			
Warrants	08/01/2017	08/01/2024	Common Stock	19,310	6.8423	I ⁽¹⁾	Held by Sante Health Ventures I, L.P. ⁽¹⁾
Warrants	08/01/2017	08/01/2024	Common Stock	4,827	6.8423	I ⁽¹⁾	Held by Sante Health Ventures I Annex Fund, L.P. ⁽¹⁾

1. Name and Address of Reporting Person* <u>SHV Management Services, LLC</u> <hr/> (Last) (First) (Middle) C/O SANTE VENTURES 300 W 6TH STREET, SUITE 2300 <hr/> (Street) AUSTIN TX 78701 <hr/> (City) (State) (Zip)		
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1. Name and Address of Reporting Person*

[Cunningham Joe H](#)

(Last) (First) (Middle)

C/O SANTE VENTURES
300 W 6TH STREET, SUITE 2300

(Street)

AUSTIN 78701

(City) (State) (Zip)

1. Name and Address of Reporting Person*

[FRENCH DOUGLAS D](#)

(Last) (First) (Middle)

C/O SANTE VENTURES
300 W 6TH STREET, SUITE 2300

(Street)

AUSTIN TX 78701

(City) (State) (Zip)

1. Name and Address of Reporting Person*

[SHV Management Services, LP](#)

(Last) (First) (Middle)

300 W 6TH STREET, SUITE 2300

(Street)

AUSTIN TX 78701

(City) (State) (Zip)

1. Name and Address of Reporting Person*

[SANTE HEALTH VENTURES I LP](#)

(Last) (First) (Middle)

300 W 6TH STREET, SUITE 2300

(Street)

AUSTIN TX 78701

(City) (State) (Zip)

1. Name and Address of Reporting Person*

[Sante Health Ventures I Annex Fund, LP](#)

(Last) (First) (Middle)

300 W 6TH STREET, SUITE 2300

(Street)

AUSTIN TX 78701

(City) (State) (Zip)

1. Name and Address of Reporting Person*

SHV Annex Services, LP

(Last) (First) (Middle)

300 W 6TH STREET, SUITE 2300

(Street)

AUSTIN TX 78701

(City) (State) (Zip)

Explanation of Responses:

1. The securities held by Sante Health Ventures I, L.P. and Sante Health Ventures I Annex Fund, L.P. may be deemed to be beneficially owned by Joe Cunningham, M.D. and Douglas D. French, who are managing directors (the "SHV Directors") of SHV Management Services, LLC ("SHV Management"). SHV Management is the general partner of SHV Management Services, LP, which is the general partner of Sante Health Ventures I, L.P., and SHV Annex Services, LP, which is the general partner of Sante Health Ventures I Annex Fund, L.P. Each of the SHV Directors, SHV Management, SHV Management Services, LP and SHV Annex Services, LP disclaims beneficial ownership of the reported securities except to the extent of his or its pecuniary interest therein.

Remarks:

(1) This amended Form 3 is being filed in order to add SHV Annex Services, LP ("Annex Services") as a Reporting Owner. Annex Services was disclosed in Explanation (1) above as the general partner of Sante Health Ventures I Annex Fund, L.P. but omitted on the table of Reporting Owners in the original filing on August 11, 2017.

SHV MANAGEMENT SERVICES, LLC, By: Kevin Lalande, Its Managing Member, By: /s/ Jason S. Kim, Attorney in fact 09/25/2017

SHV MANAGEMENT SERVICES, L.P., By: SHV Management Services, LLC, Its general partner, By: Kevin Lalande, Its Managing Member, By: /s/ Jason S. Kim, Attorney in fact 09/25/2017

SANTE HEALTH VENTURES I, L.P., By: SHV Management Services, L.P., Its general partner, By: SHV Management Services, LLC, Its general partner, By: Kevin Lalande, Its Managing Member, By: /s/ Jason S. Kim, Attorney in fact 09/25/2017

SHV ANNEX SERVICES, L.P., By: SHV Management Services, LLC, Its general partner, By: Kevin Lalande, Its Managing Member, By: /s/ Jason S. Kim, Attorney in fact 09/25/2017

SANTE HEALTH VENTURES I ANNEX FUND, L.P., By: SHV Annex Services, LP, Its general partner, By: SHV Management Services, LLC, Its general partner, By: Kevin Lalande, Its Managing Member, By: /s/ Jason S. Kim, Attorney in fact 09/25/2017

JOE CUNNINGHAM, MD, By: /s/ Jason S. Kim, Attorney-in-Fact 09/25/2017

DOUGLAS D. FRENCH, By: /s/ Jason S. Kim, Attorney-in-Fact 09/25/2017

** Signature of Reporting Person Date

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

* If the form is filed by more than one reporting person, see Instruction 5 (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).

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

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

POWER OF ATTORNEY

Know all by these present, that the undersigned hereby constitutes and appoints each of Jason Kim, President, Chief Operating Officer and Principal Financial Officer of Molecular Templates, Inc. (the "Company"), and Matthew Gardella, Matthew Tikonoff, Nishant Dharria, Adam Davey, Jacqueline Cannata, Anne Leland and Brenda Meyette of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., signing singly, with full power of substitution, the undersigned's true and lawful attorney-in-fact to:

- (1) execute for and on behalf of the undersigned, forms and authentication documents for EDGAR Filing Access;
- (2) execute for and on behalf of the undersigned, in the undersigned's capacity as an officer, director and/or 10% shareholder of Company, forms and authentication documents for EDGAR Filing Access;
- (3) do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to complete and execute any such forms and authentication documents;
- (4) execute for and on behalf of the undersigned, in the undersigned's capacity as an officer, director and/or 10% shareholder of the Company, Forms 3, 4 and 5 (including any amendments thereto) in accordance with Section 16(a) of the Securities Exchange Act of 1934, as amended, and the rules thereunder (collectively, the "Exchange Act");
- (5) do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to complete and execute any such Form 3, 4 or 5, prepare, complete and execute any amendment or amendments thereto, and timely file such form with the U.S. Securities and Exchange Commission and any stock exchange or similar authority; and
- (6) take any other action of any type whatsoever in connection with the foregoing which, in the opinion of such attorney-in-fact, may be of benefit to, in the best interest of, or legally required by, the undersigned, it being understood that the documents executed by such attorney-in-fact on behalf of the undersigned pursuant to this Power of Attorney shall be in such form and shall contain such terms and conditions as such attorney-in-fact may approve in such attorney-in-fact's discretion.

The undersigned hereby grants to each such attorney-in-fact full power and authority to do and perform any and every act and thing whatsoever requisite, necessary, or proper to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as the undersigned might or could do if personally present, with full power of substitution or revocation, hereby ratifying and confirming all that such attorney-in-fact, or such attorney-in-fact's substitute or substitutes, shall lawfully do or cause to be done by virtue of this power of attorney and the rights and powers herein granted. The undersigned acknowledges that the foregoing attorneys-in-fact, in serving in such capacity at the request of the undersigned, are not assuming nor relieving, nor is the Company assuming nor relieving, any of the undersigned's responsibilities to comply with Section 16 of the Exchange Act. The undersigned acknowledges that neither the Company nor the foregoing attorneys-in-fact assume (i) any liability for the undersigned's responsibility to comply with the requirements of the Exchange Act, (ii) any liability of the undersigned for any failure to comply with such requirements or (iii) any obligation or liability of the undersigned for profit disgorgement under Section 16(b) of the Exchange Act.

This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file forms and execute authentication documents with respect to the undersigned's EDGAR Filing Access or to file Forms 3, 4 and 5 with respect to the undersigned's holdings of and transactions in securities issued by the Company, unless earlier revoked by the undersigned in a signed writing delivered to the foregoing attorneys-in-fact.

[Signature page follows]

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of the date set forth below.

SHV ANNEX SERVICES, L.P.

By: SHV Management Services, LLC,
Its general partner

By: /s/ Kevin Lalande

Kevin Lalande,
Its Managing Member

[Signature Page to Power of Attorney]