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

SCHEDULE 13G

Under the Securities Exchange Act of 1934  
(Amendment No. 12)\*

**Molecular Templates, Inc.**

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(Name of Issuer)

**Common Stock**  
(Title of Class of Securities)

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**608550109**  
(CUSIP Number)

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**December 31, 2017**  
(Date of Event Which Requires Filing of 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).

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1. Names of Reporting Persons  
Sutter Hill Ventures, a California Limited Partnership
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  
California, USA
5. Sole Voting Power  
358,232\*
6. Shared Voting Power  
-0-
7. Sole Dispositive Power  
358,232\*
8. Shared Dispositive Power  
-0-
9. Aggregate Amount Beneficially Owned by Each Reporting Person  
358,232
10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
11. Percent of Class Represented by Amount in Row (9)  
1.3%
12. Type of Reporting Person (See Instructions)  
PN

Number of  
Shares  
Beneficially  
Owned by  
Each  
Reporting  
Person With

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\* See Appendix A.

1. Names of Reporting Persons  
Tench Coxe

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2. Check the Appropriate Box if a Member of a Group (See Instructions)  
(a)   
(b)

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3. SEC Use Only

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4. Citizenship or Place of Organization  
USA

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Number of Shares Beneficially Owned by Each Reporting Person With	5. Sole Voting Power 80,444*
	6. Shared Voting Power 358,232**
	7. Sole Dispositive Power 80,444*
	8. Shared Dispositive Power 358,232**

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9. Aggregate Amount Beneficially Owned by Each Reporting Person  
438,676

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10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

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11. Percent of Class Represented by Amount in Row (9)  
1.6%

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12. Type of Reporting Person (See Instructions)  
IN

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\* See Appendix A, Note 2.

\*\* Comprised of shares owned by Sutter Hill Ventures, a California Limited Partnership. See Appendix A.

1. Names of Reporting Persons  
James N. White

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  
USA

5. Sole Voting Power  
34,634\*

6. Shared Voting Power  
358,232\*\*

7. Sole Dispositive Power  
34,634\*

8. Shared Dispositive Power  
358,232\*\*

9. Aggregate Amount Beneficially Owned by Each Reporting Person  
392,866

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)  
1.5%

12. Type of Reporting Person (See Instructions)  
IN

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\* See Appendix A, Note 3.

\*\* Comprised of shares owned by Sutter Hill Ventures, a California Limited Partnership. See Appendix A.

1. Names of Reporting Persons  
Jeffrey W. Bird

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  
USA

5. Sole Voting Power  
38,060\*

6. Shared Voting Power  
358,232\*\*

7. Sole Dispositive Power  
38,060\*

8. Shared Dispositive Power  
358,232\*\*

9. Aggregate Amount Beneficially Owned by Each Reporting Person  
396,292

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)  
1.5%

12. Type of Reporting Person (See Instructions)  
IN

Number of  
Shares  
Beneficially  
Owned by  
Each  
Reporting  
Person With

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\* See Appendix A, Note 4.

\*\* Comprised of shares owned by Sutter Hill Ventures, a California Limited Partnership. See Appendix A.

1. Names of Reporting Persons  
Michael L. Speiser

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2. Check the Appropriate Box if a Member of a Group (See Instructions)  
(a)   
(b)

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3. SEC Use Only

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4. Citizenship or Place of Organization  
USA

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Number of Shares Beneficially Owned by Each Reporting Person With	5. Sole Voting Power 28,155*
	6. Shared Voting Power 358,232**
	7. Sole Dispositive Power 28,155*
	8. Shared Dispositive Power 358,232**

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9. Aggregate Amount Beneficially Owned by Each Reporting Person  
386,387

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10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

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11. Percent of Class Represented by Amount in Row (9)  
1.4%

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12. Type of Reporting Person (See Instructions)  
IN

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\* See Appendix A, Note 5.

\*\* Comprised of shares owned by Sutter Hill Ventures, a California Limited Partnership. See Appendix A.

1. Names of Reporting Persons  
Stefan A. Dyckerhoff
- 
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  
German citizen (U.S. permanent resident)
- 
5. Sole Voting Power  
3,231\*
- 
6. Shared Voting Power  
358,232\*\*
- 
7. Sole Dispositive Power  
3,231\*
- 
8. Shared Dispositive Power  
358,232\*\*
- 
9. Aggregate Amount Beneficially Owned by Each Reporting Person  
361,463
- 
10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
- 
11. Percent of Class Represented by Amount in Row (9)  
1.3%
- 
12. Type of Reporting Person (See Instructions)  
IN
- 

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\* See Appendix A, Note 6.

\*\* Comprised of shares owned by Sutter Hill Ventures, a California Limited Partnership. See Appendix A.

1. Names of Reporting Persons  
Samuel J. Pullara III
- 
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  
USA
- 
- |   |  |
|---|--|
| Number of<br>Shares<br>Beneficially<br>Owned by<br>Each<br>Reporting<br>Person With | 5. Sole Voting Power<br>3,613*           |
|   | 6. Shared Voting Power<br>358,232**      |
|   | 7. Sole Dispositive Power<br>3,613*      |
|   | 8. Shared Dispositive Power<br>358,232** |
- 
9. Aggregate Amount Beneficially Owned by Each Reporting Person  
361,845
- 
10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
- 
11. Percent of Class Represented by Amount in Row (9)  
1.3%
- 
12. Type of Reporting Person (See Instructions)  
IN
- 

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\* See Appendix A, Note 7.

\*\* Comprised of shares owned by Sutter Hill Ventures, a California Limited Partnership. See Appendix A.



**Item 1.**

- (a) Name of Issuer  
Molecular Templates, Inc.
- (b) Address of Issuer's Principal Executive Offices  
9301 Amberglen Blvd, Suite 100, Austin, TX 78729

**Item 2.**

- (a) Name of Person Filing  
See Appendix A; Appendix A is hereby incorporated by reference
- (b) Address of Principal Business Office or, if none, Residence  
See Appendix A
- (c) Citizenship  
See Appendix A
- (d) Title of Class of Securities  
Common Stock
- (e) CUSIP Number  
608550109

**Item 3. If this statement is filed pursuant to §§240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:**

- (a)  Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o).
- (b)  Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c).
- (c)  Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c).
- (d)  Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8).
- (e)  An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E);
- (f)  An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F);
- (g)  A parent holding company or control person in accordance with §240.13d-1(b)(1)(ii)(G);
- (h)  A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i)  A church plan that is excluded from the definition of an investment company under section 3I(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j)  Group, in accordance with §240.13d-1(b)(1)(ii)(J).

N/A

**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:

See Appendix A, which is hereby incorporated by reference and related pages 2 to 8

(b) Percent of class:

See Appendix A, which is hereby incorporated by reference and related pages 2 to 8

(c) Number of shares as to which the person has:

(i) Sole power to vote or to direct the vote

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(ii) Shared power to vote or to direct the vote

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(iii) Sole power to dispose or to direct the disposition of

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(iv) Shared power to dispose or to direct the disposition of

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\*\*\* See Appendix A, which is hereby incorporated by reference and related pages 2 to 8. Messrs. Coxe, White, Bird, Speiser, Dyckerhoff and Pullara are managing directors and members of the management committee of the general partner of Sutter Hill Ventures, a California Limited Partnership, and as such, they share voting and dispositive power over the shares held by the partnership.

**Item 5. Ownership of Five Percent or Less of a Class**

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following .

**Item 6. Ownership of More than Five Percent on Behalf of Another Person**

N/A

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

N/A

**Item 8. Identification and Classification of Members of the Group**

See Appendix A

**Item 9. Notice of Dissolution of Group**

N/A

**Item 10. Certification**

N/A

**Signature**

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

February 14, 2018  
Date

**SUTTER HILL VENTURES, A CALIFORNIA LIMITED PARTNERSHIP**

By: /s/ Robert Yin  
Robert Yin, Attorney-in-Fact for Jeffrey W. Bird, Managing Director of the General Partner

By: /s/ Robert Yin  
Robert Yin, Attorney-in-Fact for Tench Coxe

By: /s/ Robert Yin  
Robert Yin, Attorney-in-Fact for James N. White

By: /s/ Robert Yin  
Robert Yin, Attorney-in-Fact for Jeffrey W. Bird

By: /s/ Robert Yin  
Robert Yin, Attorney-in-Fact for Michael L. Speiser

By: /s/ Robert Yin  
Robert Yin, Attorney-in-Fact for Stefan A. Dyckerhoff

By: /s/ Robert Yin  
Robert Yin, Attorney-in-Fact for Samuel J. Pullara III

**ATTENTION**

**Intentional misstatements or omissions of fact constitute Federal Criminal Violations (See 18 U.S.C. 1001).**

**APPENDIX A TO SCHEDULE 13G – MOLECULAR TEMPLATES, INC.**

<b>Name of Reporting Person</b>	<b>Aggregate Number of Shares Beneficially Owned</b>		<b>% of Total Shares</b>	
	<b>Individual</b>	<b>Aggregate</b>		
Sutter Hill Ventures, a California Limited Partnership	358,232		1.3%	
Tench Coxe	80,444	Note 2	0.3%	
		438,676	Note 1	1.6%
James N. White	34,634	Note 3		0.1%
		392,866	Note 1	1.5%
Jeffrey W. Bird	38,060	Note 4		0.1%
		396,292	Note 1	1.5%
Michael L. Speiser	28,155	Note 5		0.1%
		386,387	Note 1	1.4%
Stefan A. Dyckerhoff	3,231	Note 6		0.0%
		361,463	Note 1	1.3%
Samuel J. Pullara III	3,613	Note 7		0.0%
		361,845	Note 1	1.3%

The address for all of the above is: 755 Page Mill Road, Suite A-200, Palo Alto, CA 94304.

The partnership is organized in California. The individuals are all U.S. citizens and residents with the exception of Mr. Dyckerhoff who is a German citizen and U.S. permanent resident.

None of the above has been convicted in any criminal proceedings nor have they been subject to judgments, decrees, or final orders enjoining future violations of Federal or State securities laws.

All of the parties are individuals or entities in the venture capital business.

Note 1: Includes individual shares plus all shares held by Sutter Hill Ventures, a California Limited Partnership of which the reporting person is a managing director and member of the management committee of the general partner.

Note 2: Comprised of 34,728 shares held in The Coxe Revocable Trust of which the reporting person is a trustee, 16,619 shares held by a retirement trust for the benefit of the reporting person and 29,097 shares held by Rooster Partners, L.P. of which the reporting person is a trustee of a trust which is the general partner.

Note 3: Comprised of 34,264 shares held in The White Revocable Trust of which the reporting person is a trustee and 370 shares held in a Roth IRA for the benefit of the reporting person.

Note 4: Comprised of 34,342 shares held in the Jeffrey W. and Christina R. Bird Trust of which the reporting person is a trustee, 83 shares held in a Roth IRA for the benefit of the reporting person and 3,635 shares held directly.

Note 5: Comprised of 28,155 shares held in the Speiser Trust of which the reporting person is a trustee.

Note 6: Comprised of 3,231 shares held in the Dyckerhoff 2001 Revocable Trust of which the reporting person is a trustee.

Note 7: Comprised of 3,613 shares held in The Pullara Revocable Trust of which the reporting person is a trustee.