

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

SCHEDULE 13D

Under the Securities Exchange Act of 1934  
(Amendment No. 3)\*

**Molecular Templates, Inc.**

(Name of Issuer)

**Common stock, \$0.001 par value per share**  
(Title of Class of Securities)

**608550208**  
(CUSIP Number)

**Jason Brandt**  
**c/o Santé Ventures**  
**201 West 5th Street, Suite 1500**  
**Austin, Texas 78701**  
**(512) 721-1200**

(Name, Address and Telephone Number of Person  
Authorized to Receive Notices and Communications)

**April 2, 2024**  
(Date of Event Which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

**Note:** Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7 for other parties to whom copies are to be sent.

\* 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 disclosures provided in a prior cover page.

The information required on 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 Santé Health Ventures I, LP		
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>		
3.	SEC Use Only		
4.	Source of Funds (See Instructions) WC		
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>		
6.	Citizenship or Place of Organization Delaware		
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 407,773 (1)	
	8.	Shared Voting Power See response to row 7.	
	9.	Sole Dispositive Power 407,773 (1)	
	10.	Shared Dispositive Power See response to row 9.	
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 407,773		
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>		
13.	Percent of Class Represented by Amount in Row (11) 6.2% (2)		
14.	Type of Reporting Person (See Instructions) PN		

- (1) Consists of 406,486 shares of common stock and 1,287 shares of common stock issuable upon exercise of warrants held directly by SHV I. SHV Services is the general partner of SHV I and SHV Management is the general partner of SHV Services. Each of SHV Services and SHV Management may be deemed to have sole voting and dispositive power over these shares. Cunningham, French and Lalande are the managing members of SHV Management and may be deemed to share voting and dispositive power over these shares.
- (2) This percentage is calculated based upon the sum of: (i) 5,374,268 shares of Common Stock outstanding as of March 25, 2024, as reported in the Issuer's Annual Report on Form 10-K filed with the Securities and Exchange Commission (the "SEC") on March 19, 2024; (ii) 1,209,612 shares of Common Stock issued in the private placement of equity securities by the Issuer that closed on April 2, 2024 (the "2024 Private Placement") as disclosed in the Issuer's Current Report on Form 8-K filed with the SEC on March 28, 2024; and (iii) 1,287 shares of Common Stock issuable upon the exercise of the warrants.

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CUSIP No. 608550208

1.	Names of Reporting Persons SHV Management Services, LP		
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>		
3.	SEC Use Only		
4.	Source of Funds (See Instructions) WC		
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>		
6.	Citizenship or Place of Organization Delaware		
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 411,106 (1)	
	8.	Shared Voting Power See response to row 7.	
	9.	Sole Dispositive Power 411,106 (1)	
	10.	Shared Dispositive Power See response to row 9.	
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 411,106		
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>		
13.	Percent of Class Represented by Amount in Row (11) 6.2% (2)		
14.	Type of Reporting Person (See Instructions) PN		

- (1) Consists of (i) 406,486 shares of common stock and 1,287 shares of common stock issuable upon exercise of warrants held directly by SHV I and (ii) 3,333 shares of common stock held directly by SHV Services. SHV Services is the general partner of SHV I and SHV Management is the general partner of SHV Services. Each of SHV Services and SHV Management may be deemed to have sole voting and dispositive power over these shares. Cunningham, French and Lalande are the managing members of SHV Management and may be deemed to share voting and dispositive power over these shares.
- (2) This percentage is calculated based upon the sum of: (i) 5,374,268 shares of Common Stock outstanding as of March 25, 2024, as reported in the Issuer's Annual Report on Form 10-K filed with the SEC on March 19, 2024; (ii) 1,209,612 shares of Common Stock issued in the 2024 Private Placement as disclosed in the Issuer's Current Report on Form 8-K filed with the SEC on March 28, 2024; and (iii) 1,287 shares of Common Stock issuable upon the exercise of the warrants.

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CUSIP No. 608550208

1.	Names of Reporting Persons Santé Health Ventures I Annex Fund, LP		
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>		
3.	SEC Use Only		
4.	Source of Funds (See Instructions) WC		
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>		
6.	Citizenship or Place of Organization Delaware		
Number of Shares Beneficially Owned by Each Reporting	7.	Sole Voting Power 57,966 (1)	
	8.	Shared Voting Power See response to row 7.	
	9.	Sole Dispositive Power 57,966 (1)	

Person With	10.	Shared Dispositive Power See response to row 9.
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 57,966	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 0.9% (2)	
14.	Type of Reporting Person (See Instructions) PN	

- (1) Consists of 57,644 shares of common stock and 322 shares of common stock issuable upon exercise of warrants held directly by Annex Fund. Annex Services is the general partner of Annex Fund and SHV Management is the general partner of Annex Services. Each of Annex Services and SHV Management may be deemed to have sole voting and dispositive power over these shares. Cunningham, French and Lalande are the managing members of SHV Management and may be deemed to share voting and dispositive power over these shares.
- (2) This percentage is calculated based upon the sum of: (i) 5,374,268 shares of Common Stock outstanding as of March 25, 2024, as reported in the Issuer's Annual Report on Form 10-K filed with the SEC on March 19, 2024; (ii) 1,209,612 shares of Common Stock issued in the 2024 Private Placement as disclosed in the Issuer's Current Report on Form 8-K filed with the SEC on March 28, 2024; and (iii) 322 shares of Common Stock issuable upon the exercise of warrants

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CUSIP No. 608550208

1.	Names of Reporting Persons SHV Annex Services, LP	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) WC	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization Delaware	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 57,966 (1)
	8.	Shared Voting Power See response to row 7.
	9.	Sole Dispositive Power 57,966 (1)
	10.	Shared Dispositive Power See response to row 9.
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 57,966	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 0.9% (2)	
14.	Type of Reporting Person (See Instructions) PN	

- (1) Consists of 57,644 shares of common stock and 322 shares of common stock issuable upon exercise of warrants held directly by Annex Fund. Annex Services is the general partner of Annex Fund and SHV Management is the general partner of Annex Services. Each of Annex Services and SHV Management may be deemed to have sole voting and dispositive power over these shares. Cunningham, French and Lalande are the managing members of SHV Management and may be deemed to share voting and dispositive power over these shares.
- (2) This percentage is calculated based upon the sum of: (i) 5,374,268 shares of Common Stock outstanding as of March 25, 2024, as reported in the Issuer's Annual Report on Form 10-K filed with the SEC on March 19, 2024; (ii) 1,209,612 shares of Common Stock issued in the 2024 Private Placement as disclosed in the Issuer's Current Report on Form 8-K filed with the SEC on March 28, 2024; and (iii) 322 shares of Common Stock issuable upon the exercise of warrants.

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CUSIP No. 608550208

1.	Names of Reporting Persons SHV Management Services, LLC	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) WC	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	

6.	Citizenship or Place of Organization Delaware		
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 469,072 (1)	
	8.	Shared Voting Power See response to row 7.	
	9.	Sole Dispositive Power 469,072 (1)	
	10.	Shared Dispositive Power See response to row 9.	
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 469,072		
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>		
13.	Percent of Class Represented by Amount in Row (11) 7.1% (2)		
14.	Type of Reporting Person (See Instructions) OO		

- (1) Consists of (i) 406,486 shares of common stock and 1,287 shares of common stock issuable upon exercise of warrants held directly by SHV I; (ii) 3,333 shares of common stock held directly by SHV Services; and (iii) 57,644 shares of common stock and 322 shares of common stock issuable upon exercise of warrants held directly by Annex Fund. SHV Services is the general partner of SHV I and may be deemed to have sole voting and dispositive power over the shares held by SHV I. Annex Services is the general partner of Annex Fund and may be deemed to have sole voting and dispositive power over the shares held by Annex Fund. SHV Management is the general partner of each of SHV Services and Annex Services and may be deemed to have sole voting and dispositive power over the shares held by SHV I and Annex Fund. Cunningham, French and Lalande are the managing members of SHV Management and may be deemed to share voting and dispositive power over all of these shares.
- (2) This percentage is calculated based upon the sum of: (i) 5,374,268 shares of Common Stock outstanding as of March 25, 2024, as reported in the Issuer's Annual Report on Form 10-K filed with the SEC on March 19, 2024; (ii) 1,209,612 shares of Common Stock issued in the 2024 Private Placement as disclosed in the Issuer's Current Report on Form 8-K filed with the SEC on March 28, 2024; and (iii) 1,609 shares of Common Stock issuable upon the exercise of warrants.

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CUSIP No. 608550208

1.	Names of Reporting Persons SHV MTEM SPV, LLC		
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>		
3.	SEC Use Only		
4.	Source of Funds (See Instructions) WC		
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>		
6.	Citizenship or Place of Organization Delaware		
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 175,000 (1)	
	8.	Shared Voting Power See response to row 7.	
	9.	Sole Dispositive Power 175,000 (1)	
	10.	Shared Dispositive Power See response to row 9.	
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 175,000		
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>		
13.	Percent of Class Represented by Amount in Row (11) 2.7% (2)		
14.	Type of Reporting Person (See Instructions) OO		

- (1) Shares are held directly by SHV SPV. Accel IV is the managing member of SHV SPV, SHV IV is the manager of Accel IV, SHV IV Services is the general partner of SHV IV and SHV IV Management is the general partner of SHV IV Services. Each of SHV IV, SHV IV Services and SHV IV Management may be deemed to have sole voting and dispositive power over these shares. Cunningham, French and Lalande are the managing members of SHV IV Management and may be deemed to share voting and dispositive power over these shares. Excludes 2024 Pre-Funded Warrants and 2024 Common Warrants (each as defined herein) to purchase 402,077 shares of Common Stock and 1,154,154 shares of Common Stock, respectively, held by SHV SPV, which are not exercisable by virtue of a beneficial ownership limitation which prohibits the exercise of such warrants to the extent that such exercise would result in SHV SPV, together with its affiliates, beneficially owning greater than 9.99% of the outstanding Common Stock.
- (2) This percentage is calculated based upon the sum of: (i) 5,374,268 shares of Common Stock outstanding as of March 25, 2024, as reported in the Issuer's Annual Report on Form 10-K filed with the SEC on March 19, 2024 and (ii) 1,209,612 shares of Common Stock issued in the 2024 Private Placement as disclosed in the Issuer's Current Report on Form 8-K filed with the SEC on March 28, 2024.

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CUSIP No. 608550208

1.	Names of Reporting Persons Santé Accel Ventures IV, LLC		
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>		
3.	SEC Use Only		
4.	Source of Funds (See Instructions) WC		
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>		
6.	Citizenship or Place of Organization Delaware		
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 175,000 (1)	
	8.	Shared Voting Power See response to row 7.	
	9.	Sole Dispositive Power 175,000 (1)	
	10.	Shared Dispositive Power See response to row 9.	
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 175,000		
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>		
13.	Percent of Class Represented by Amount in Row (11) 2.7% (2)		
14.	Type of Reporting Person (See Instructions) OO		

- (1) Shares are held directly by SHV SPV. Accel IV is the managing member of SHV SPV, SHV IV is the manager of Accel IV, SHV IV Services is the general partner of SHV IV and SHV IV Management is the general partner of SHV IV Services. Each of SHV IV, SHV IV Services and SHV IV Management may be deemed to have sole voting and dispositive power over these shares. Cunningham, French and Lalande are the managing members of SHV IV Management and may be deemed to share voting and dispositive power over these shares. Excludes 2024 Pre-Funded Warrants and 2024 Common Warrants (each as defined herein) to purchase 402,077 shares of Common Stock and 1,154,154 shares of Common Stock, respectively, held by SHV SPV, which are not exercisable by virtue of a beneficial ownership limitation which prohibits the exercise of such warrants to the extent that such exercise would result in SHV SPV, together with its affiliates, beneficially owning greater than 9.99% of the outstanding Common Stock.
- (2) This percentage is calculated based upon the sum of: (i) 5,374,268 shares of Common Stock outstanding as of March 25, 2024, as reported in the Issuer's Annual Report on Form 10-K filed with the SEC on March 19, 2024 and (ii) 1,209,612 shares of Common Stock issued in the 2024 Private Placement as disclosed in the Issuer's Current Report on Form 8-K filed with the SEC on March 28, 2024.

CUSIP No. 608550208

1.	Names of Reporting Persons Santé Health Ventures IV, L.P.		
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>		
3.	SEC Use Only		
4.	Source of Funds (See Instructions) WC		
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>		
6.	Citizenship or Place of Organization Delaware		
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 175,000 (1)	
	8.	Shared Voting Power See response to row 7.	
	9.	Sole Dispositive Power 175,000 (1)	
	10.	Shared Dispositive Power See response to row 9.	
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 175,000		
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>		
13.	Percent of Class Represented by Amount in Row (11) 2.7% (2)		
14.	Type of Reporting Person (See Instructions) PN		

- (1) Shares are held directly by SHV SPV. Accel IV is the managing member of SHV SPV, SHV IV is the manager of Accel IV, SHV IV Services is the general partner of SHV IV and SHV IV Management is the general partner of SHV IV Services. Each of SHV IV, SHV IV Services and SHV IV Management may be deemed to have sole voting and dispositive power over these shares. Cunningham, French and Lalande are the managing members of SHV IV Management and may be deemed to share voting and dispositive power over these shares. Excludes 2024 Pre-Funded Warrants and 2024 Common Warrants (each as defined herein) to purchase 402,077 shares of Common Stock and 1,154,154 shares of Common Stock, respectively, held by SHV SPV, which are not exercisable by virtue of a beneficial ownership limitation which prohibits the exercise of such warrants to the extent that such exercise would result in SHV SPV, together with its affiliates, beneficially owning greater than 9.99% of the outstanding Common Stock.
- (2) This percentage is calculated based upon the sum of: (i) 5,374,268 shares of Common Stock outstanding as of March 25, 2024, as reported in the Issuer's Annual Report on Form 10-K filed with the SEC on March 19, 2024 and (ii) 1,209,612 shares of Common Stock issued in the 2024 Private Placement as disclosed in the Issuer's Current Report on Form 8-K filed with the SEC on March 28, 2024.

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CUSIP No. 608550208

1.	Names of Reporting Persons SHV Management Services IV, LP	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) WC	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization Delaware	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 175,000 (1)
	8.	Shared Voting Power See response to row 7.
	9.	Sole Dispositive Power 175,000 (1)
	10.	Shared Dispositive Power See response to row 9.
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 175,000	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 2.7% (2)	
14.	Type of Reporting Person (See Instructions) PN	

- (1) Shares are held directly by SHV SPV. Accel IV is the managing member of SHV SPV, SHV IV is the manager of Accel IV, SHV IV Services is the general partner of SHV IV and SHV IV Management is the general partner of SHV IV Services. Each of SHV IV, SHV IV Services and SHV IV Management may be deemed to have sole voting and dispositive power over these shares. Cunningham, French and Lalande are the managing members of SHV IV Management and may be deemed to share voting and dispositive power over these shares. Excludes 2024 Pre-Funded Warrants and 2024 Common Warrants (each as defined herein) to purchase 402,077 shares of Common Stock and 1,154,154 shares of Common Stock, respectively, held by SHV SPV, which are not exercisable by virtue of a beneficial ownership limitation which prohibits the exercise of such warrants to the extent that such exercise would result in SHV SPV, together with its affiliates, beneficially owning greater than 9.99% of the outstanding Common Stock.
- (2) This percentage is calculated based upon the sum of: (i) 5,374,268 shares of Common Stock outstanding as of March 25, 2024, as reported in the Issuer's Annual Report on Form 10-K filed with the SEC on March 19, 2024 and (ii) 1,209,612 shares of Common Stock issued in the 2024 Private Placement as disclosed in the Issuer's Current Report on Form 8-K filed with the SEC on March 28, 2024.

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CUSIP No. 608550208

1.	Names of Reporting Persons SHV Management Services IV, LLC	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) WC	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization Delaware	
Number of	7.	Sole Voting Power 175,000 (1)

Shares Beneficially Owned by Each Reporting Person With	8.	Shared Voting Power See response to row 7.
	9.	Sole Dispositive Power 175,000 (1)
	10.	Shared Dispositive Power See response to row 9.
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 175,000	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 2.7% (2)	
14.	Type of Reporting Person (See Instructions) OO	

- (1) Shares are held directly by SHV SPV. Accel IV is the managing member of SHV SPV, SHV IV is the manager of Accel IV, SHV IV Services is the general partner of SHV IV and SHV IV Management is the general partner of SHV IV Services. Each of SHV IV, SHV IV Services and SHV IV Management may be deemed to have sole voting and dispositive power over these shares. Cunningham, French and Lalande are the managing members of SHV IV Management and may be deemed to share voting and dispositive power over the shares held by SHV I, Annex Fund and Annex Services. Excludes 2024 Pre-Funded Warrants and 2024 Common Warrants (each as defined herein) to purchase 402,077 shares of Common Stock and 1,154,154 shares of Common Stock, respectively, held by SHV SPV, which are not exercisable by virtue of a beneficial ownership limitation which prohibits the exercise of such warrants to the extent that such exercise would result in SHV SPV, together with its affiliates, beneficially owning greater than 9.99% of the outstanding Common Stock.
- (2) This percentage is calculated based upon the sum of: (i) 5,374,268 shares of Common Stock outstanding as of March 25, 2024, as reported in the Issuer's Annual Report on Form 10-K filed with the SEC on March 19, 2024 and (ii) 1,209,612 shares of Common Stock issued in the 2024 Private Placement as disclosed in the Issuer's Current Report on Form 8-K filed with the SEC on March 28, 2024.

CUSIP No. 608550208

1.	Names of Reporting Persons Joe H. Cunningham	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) AF	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 644,072 (1)
	8.	Shared Voting Power See response to row 7.
	9.	Sole Dispositive Power 644,072 (1)
	10.	Shared Dispositive Power See response to row 9.
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 644,072	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 9.8% (2)	
14.	Type of Reporting Person (See Instructions) IN	

- (1) Consists of (i) 406,486 shares of common stock and 1,287 shares of common stock issuable upon exercise of warrants held directly by SHV I; (ii) 3,333 shares of common stock held directly by SHV Services; (iii) 57,644 shares of common stock and 322 shares of common stock issuable upon exercise of warrants held directly by Annex Fund; and (iv) 175,000 shares of common stock held directly by SHV SPV. SHV Services is the general partner of SHV I and may be deemed to have sole voting and dispositive power over the shares held by SHV I. Annex Services is the general partner of Annex Fund and may be deemed to have sole voting and dispositive power over the shares held by Annex Fund. SHV Management is the general partner of each of SHV Services and Annex Services and may be deemed to have sole voting and dispositive power over the shares held by SHV I and Annex Fund. Accel IV is the managing member of SHV SPV, SHV IV is the manager of Accel IV, SHV IV Services is the general partner of SHV IV and SHV IV Management is the general partner of SHV IV Services. Each of SHV IV, SHV IV Services and SHV IV Management may be deemed to have sole voting and dispositive power over the shares held by SHV SPV. Cunningham, French and Lalande are the managing members of each of SHV Management and SHV IV Management and may be deemed to share voting and dispositive power over the shares held by SHV I, SHV Services, Annex Fund, and SHV SPV. Excludes 2024 Pre-Funded Warrants and 2024 Common Warrants (each as defined herein) to purchase 402,077 shares of Common Stock and 1,154,154 shares of Common Stock, respectively, held by SHV SPV, which are not exercisable by virtue of a beneficial ownership limitation which prohibits the exercise of such warrants to the extent that such exercise would result in SHV SPV, together with its affiliates, beneficially owning greater than 9.99% of the outstanding Common Stock.
- (2) This percentage is calculated based upon the sum of: (i) 5,374,268 shares of Common Stock outstanding as of March 25, 2024, as reported in the Issuer's Annual Report on Form 10-K filed with the SEC on March 19, 2024; (ii) 1,209,612 shares of Common Stock issued in the 2024 Private Placement as disclosed in the Issuer's Current Report on Form 8-K filed with the SEC on March 28, 2024; and (iii) 1609 shares of Common Stock issuable upon the exercise of the warrants.

CUSIP No. 608550208

1.	Names of Reporting Persons Douglas D. French	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) AF	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 644,072 (1)
	8.	Shared Voting Power See response to row 7.
	9.	Sole Dispositive Power 644,072 (1)
	10.	Shared Dispositive Power See response to row 9.
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 644,072	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 9.8% (2)	
14.	Type of Reporting Person (See Instructions) IN	

- (1) Consists of (i) 406,486 shares of common stock and 1,287 shares of common stock issuable upon exercise of warrants held directly by SHV I; (ii) 3,333 shares of common stock held directly by SHV Services; (iii) 57,644 shares of common stock and 322 shares of common stock issuable upon exercise of warrants held directly by Annex Fund; and (iv) 175,000 shares of common stock held directly by SHV SPV. SHV Services is the general partner of SHV I and may be deemed to have sole voting and dispositive power over the shares held by SHV I. Annex Services is the general partner of Annex Fund and may be deemed to have sole voting and dispositive power over the shares held by Annex Fund. SHV Management is the general partner of each of SHV Services and Annex Services and may be deemed to have sole voting and dispositive power over the shares held by SHV I and Annex Fund. Accel IV is the managing member of SHV SPV, SHV IV is the manager of Accel IV, SHV IV Services is the general partner of SHV IV and SHV IV Management is the general partner of SHV IV Services. Each of SHV IV, SHV IV Services and SHV IV Management may be deemed to have sole voting and dispositive power over the shares held by SHV SPV. Cunningham, French and Lalande are the managing members of each of SHV Management and SHV IV Management and may be deemed to share voting and dispositive power over the shares held by SHV I, SHV Services, Annex Fund, and SHV SPV. Excludes 2024 Pre-Funded Warrants and 2024 Common Warrants (each as defined herein) to purchase 402,077 shares of Common Stock and 1,154,154 shares of Common Stock, respectively, held by SHV SPV, which are not exercisable by virtue of a beneficial ownership limitation which prohibits the exercise of such warrants to the extent that such exercise would result in SHV SPV, together with its affiliates, beneficially owning greater than 9.99% of the outstanding Common Stock.
- (2) This percentage is calculated based upon the sum of: (i) 5,374,268 shares of Common Stock outstanding as of March 25, 2024, as reported in the Issuer's Annual Report on Form 10-K filed with the SEC on March 19, 2024; (ii) 1,209,612 shares of Common Stock issued in the 2024 Private Placement as disclosed in the Issuer's Current Report on Form 8-K filed with the SEC on March 28, 2024; and (iii) 1609 shares of Common Stock issuable upon the exercise of the warrants.

CUSIP No. 608550208

1.	Names of Reporting Persons Kevin M. Lalande	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) AF	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 665,538 (1)
	8.	Shared Voting Power See response to row 7.
	9.	Sole Dispositive Power 665,538 (1)
	10.	Shared Dispositive Power See response to row 9.



11.	Aggregate Amount Beneficially Owned by Each Reporting Person 665,538
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>
13.	Percent of Class Represented by Amount in Row (11) 10.1% (2)
14.	Type of Reporting Person (See Instructions) IN

- (1) Consists of (i) 406,486 shares of common stock and 1,287 shares of common stock issuable upon exercise of warrants held directly by SHV I; (ii) 3,333 shares of common stock held directly by SHV Services; (iii) 57,644 shares of common stock and 322 shares of common stock issuable upon exercise of warrants held directly by Annex Fund; (iv) 175,000 shares of common stock held directly by SHV SPV; (v) 14,800 shares of common stock directly by SHVMS, LLC; and (vi) 6,666 shares of Common Stock issuable upon exercise of stock options. SHV Services is the general partner of SHV I and may be deemed to have sole voting and dispositive power over the shares held by SHV I. Annex Services is the general partner of Annex Fund and may be deemed to have sole voting and dispositive power over the shares held by Annex Fund. SHV Management is the general partner of each of SHV Services and Annex Services and may be deemed to have sole voting and dispositive power over the shares held by SHV I and Annex Fund. Accel IV is the managing member of SHV SPV, SHV IV is the manager of Accel IV, SHV IV Services is the general partner of SHV IV and SHV IV Management is the general partner of SHV IV Services. Each of SHV IV, SHV IV Services and SHV IV Management may be deemed to have sole voting and dispositive power over the shares held by SHV SPV. Cunningham, French and Lalande are the managing members of each of SHV Management and SHV IV Management and may be deemed to share voting and dispositive power over the shares held by SHV I, SHV Services, Annex Fund, and SHV SPV. Lalande is a managing member of SHVMS, LLC and may be deemed to have voting and dispositive power over the shares held by SHVMS, LLC. Excludes 2024 Pre-Funded Warrants and 2024 Common Warrants (each as defined herein) to purchase 402,077 shares of Common Stock and 1,154,154 shares of Common Stock, respectively, held by SHV SPV, which are not exercisable by virtue of a beneficial ownership limitation which prohibits the exercise of such warrants to the extent that such exercise would result in SHV SPV, together with its affiliates, beneficially owning greater than 9.99% of the outstanding Common Stock.
- (2) This percentage is calculated based upon the sum of: (i) 5,374,268 shares of Common Stock outstanding as of March 25, 2024, as reported in the Issuer's Annual Report on Form 10-K filed with the SEC on March 19, 2024; (ii) 1,209,612 shares of Common Stock issued in the 2024 Private Placement as disclosed in the Issuer's Current Report on Form 8-K filed with the SEC on March 28, 2024; (iii) 1,609 shares of Common Stock issuable upon the exercise of the warrants; and (iv) 6,666 shares of Common Stock issuable upon exercise of stock options.

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**Explanatory Note:** This Amendment No. 3 ("Amendment No. 3"), which amends the Schedule 13D filed with the Securities and Exchange Commission (the "SEC") on August 14, 2017 and amended on May 4, 202 and September 18, 2020 (the "Original Schedule 13D") filed on behalf of Santé Health Ventures I, LP, SHV Management Services, LP, Santé Health Ventures I Annex Fund, LP, SHV Annex Services, LP, SHV Management Services, LLC, Joe H. Cunningham, Douglas D. French and Kevin M. Lalande, relates to the common stock, par value \$0.001 per share (the "Common Stock"), of Molecular Templates, Inc., a Delaware corporation (the "Issuer"). Unless otherwise defined herein, capitalized terms used in this Amendment No. 3 shall have the meanings ascribed to them in the Original Schedule 13D. This Amendment No. 3 is being filed to report the acquisition of securities by SHV SPV (as defined below) in the 2024 Private Placement (as defined below).

The share numbers in this Amendment No. 3 also give effect to a 1-for-15 reverse split of the outstanding shares of the Issuer's Common Stock effected on August 11, 2023.

Except as amended hereby, the Original Schedule 13D remains in full force and effect.

## Item 2. Identity and Background

Item 2 of the Statement is hereby amended and restated as follows:

- (a) The persons and entities filing this Schedule 13D are Santé Health Ventures I, L.P. ("SHV I"), a Delaware limited partnership, SHV Management Services, LP ("SHV Services"), a Delaware limited partnership, SHV Management Services, LLC ("SHV Management"), a Delaware limited liability company, Sante Health Ventures I Annex Fund, L.P. ("Annex Fund"), a Delaware limited partnership, SHV Annex Services, LP ("Annex Services"), a Delaware limited partnership, SHV MTEM SPV, LLC ("SHV SPV"), a Delaware limited liability company, Santé Accel Ventures IV, LLC ("Accel IV"), a Delaware limited liability company, Santé Health Ventures IV, L.P. ("SHV IV"), a Delaware limited partnership, SHV Management Services IV, LP ("SHV IV Services"), a Delaware limited partnership, SHV Management Services IV, LLC ("SHV IV"), a Delaware limited liability company, Joe H. Cunningham ("Cunningham"), Douglas D. French ("French") and Kevin Lalande ("Lalande" and, collectively, the "Reporting Persons"). SHV Services is the general partner of SHV I and Annex Services is the general partner of Annex Fund. SHV Management is the general partner of each of SHV Services and Annex Services. SHV IV is the managing member of SHV SPV, SHV IV Services is the general partner of SHV IV and SHV IV Management is the general partner of SHV IV Services. Cunningham, French and Lalande are the managing members of each SHV Management and SHV IV Management and may be deemed to share voting and dispositive power over the shares directly held by SHV I, SHV Services, Annex Fund and SHV SPV. Lalande is a managing member of SHVMS, LLC and may be deemed to have voting and dispositive power over the shares held by SHVMS, LLC.
- (b) The address of the principal place of business for each of the Reporting Persons is c/o Santé Ventures, 201 West 5th Street, Suite 1500, Austin, Texas 78701.
- (c) The principal occupation of each of the Reporting Persons is the venture capital investment business. The principal business of each of SHV I, Annex Fund, SHV SPV and SHV IV is to make investments in private and public companies. The principal business of SHV Services is to serve as the general partner of SHV I. The principal business of SHV Annex Services is to serve as the general partner of Annex Fund. The principal business of SHV Management is to serve as the general partner of each of SHV Services and Annex Services. The principal business of SHV IV Services is to serve as the general partner of SHV IV. The principal business of SHV IV Management is to serve as the general partner of SHV IV Services. Cunningham, French and Lalande are collectively the members of each of SHV Management and SHV Management IV.
- (d) During the last five years, none of the Reporting Persons has been convicted in any criminal proceeding (excluding traffic violations or similar misdemeanors).
- (e) During the last five years, none of the Reporting Persons has been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.
- (f) Each of SHV I, SHV Services, Annex Fund, Annex Services, SHV IV and SHV IV Services is a Delaware limited partnership. Each of SHV Management, SHV IV Management and SHV SPV is a Delaware limited liability company. Cunningham, French and Lalande are all U.S. citizens.

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### Item 3. Source and Amount of Funds or Other Consideration

Item 3 of the Statement is hereby amended and supplemented to add the following:

On March 28, 2024, SHV SPV entered into an Amended and Restated Securities Purchase Agreement (the “2024 Securities Purchase Agreement”) with the Issuer to purchase (i) 175,000 shares of the Issuer’s Common Stock (the “2024 Shares”); (ii) pre-funded warrants (the “2024 Pre-Funded Warrants”) to purchase 402,077 shares of Common Stock; and (iii) common warrants (the “2024 Common Warrants”) to purchase 1,154,154 shares of Common Stock in a private offering (the “2024 Private Placement”) for an aggregate purchase price of \$1.5 million. SHV SPV received the 2024 Shares and 2024 Pre-Funded Warrants and 2024 Common Warrants on April 2, 2024 (the “Closing Date”) pursuant to the closing of the 2024 Private Placement.

The funds used by SHV SPV to acquire the securities of the Issuer described herein were from capital contributions made by its members.

### Item 5. Interest in Securities of the Issuer

- (a) – (b). Regarding aggregate beneficial ownership, see Row 11 of the cover page of each Reporting Person. Regarding percentage beneficial ownership, see Row 13 of the cover page of each Reporting Person.
- Regarding sole power to vote shares, see Row 7 of the cover page of each Reporting Person. Regarding shared power to vote shares, see Row 8 of the cover page of each Reporting Person. Regarding sole power to dispose of shares, see Row 9 of the cover page of each Reporting Person. Regarding shared power to dispose of shares, see Row 10 of the cover page of each Reporting Person.
- (c) Except as set forth above, the Reporting Persons have not effected any transaction in the Common Stock of the Issuer during the past 60 days.
- (d) No person (other than the Reporting Persons) is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the shares of Common Stock subject to this Schedule 13D.
- (e) Not applicable.

### Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer

Item 6 of the Statement is hereby amended and supplemented to add the following:

The information set forth in Item 3 this Amendment No. 3 is incorporated herein by reference.

#### *Securities Purchase Agreement*

Pursuant to the Securities Purchase Agreement, the Issuer granted to the purchasers, including SHV SPV, certain registration rights, pursuant to which, among other things, the Issuer will (i) file with the SEC a registration statement on Form S-3 after the closing of the 2024 Private Placement to register for resale the Shares (and the shares of Common Stock issuable upon exercise of the Pre-Funded Warrants and Common Warrants ) issued in the 2024 Private Placement, within 30 calendar days following the Closing Date, and (ii) use its commercially reasonable efforts to have the registration statement declared effective as soon as practicable, and in any event no later than 90 days following the Closing Date (or 120 days following the Closing Date if the registration statement is reviewed by the SEC). The registration rights covenants are subject to customary terms and conditions for a transaction of this type, including certain customary cash penalties on the Issuer for its failure to satisfy specified filing and effectiveness time periods.

The foregoing description is qualified in its entirety by the full text of the form of Securities Purchase Agreement, which is filed herewith as Exhibit 11 and incorporated herein by reference.

#### *2024 Common Warrants*

Each 2024 Common Warrant has an exercise price of \$2.35 per share of Common Stock, is immediately exercisable and has a term of five years. Under the terms of the 2024 Common Warrants, the 2024 Common Warrants may not be exercised if the aggregate number of shares of Common Stock beneficially owned by SHV SPV (together with its affiliates) immediately following such exercise would exceed a beneficial ownership limitation 9.99%; provided, however, that SHV SPV may increase or decrease the beneficial ownership limitation by giving 61 days’ notice to the Issuer, but not to any percentage in excess of 19.99%. By virtue of this limitation, as of the date hereof, the 2024 Common Warrants held by SHV SPV are not currently exercisable within 60 days and, therefore, the shares issuable upon exercise of the 2024 Common Warrants are not considered to be beneficially owned by the Reporting Persons.

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The foregoing description is qualified in its entirety by the full text of the Form of Common Warrant, which is filed herewith as Exhibit 12 and incorporated herein by reference.

#### *2024 Pre-Funded Warrant to Purchase Common Stock*

Each 2024 Pre-Funded Warrant has an exercise price of \$2.349 per Pre-Funded Warrant, is immediately exercisable and has no expiration date. Under the terms of the 2024 Pre-Funded Warrants, the 2024 Pre-Funded Warrants may not be exercised if the aggregate number of shares of Common Stock beneficially owned by SHV SPV (together with its affiliates) immediately following such exercise would exceed a beneficial ownership limitation 9.99%; provided, however, that SHV SPV may increase or decrease the beneficial ownership limitation by giving 61 days’ notice to the Issuer, but not to any percentage in excess of 19.99%. By virtue of this limitation, as of the date hereof, the 2024 Pre-Funded Warrants held by SHV SPV are not currently exercisable within 60 days and, therefore, the shares issuable upon exercise of the 2024 Common Warrants are not considered to be beneficially owned by the Reporting Persons.

The foregoing description is qualified in its entirety by the full text of the Form of Prefunded Warrant to Purchase Common Stock, which is filed herewith as Exhibit 13 and incorporated herein by reference.

### Item 7. Material to be Filed as Exhibits

Item 7 of the Statement is hereby amended and supplemented to add the following:

Exhibit 1 Joint Filing Agreement as required by Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, as amended.

[Exhibit 11](#) [Amended and Restated Securities Purchase Agreement dated March 28, 2024 \(incorporated by reference to Exhibit 4.1 to the Issuer’s Form 8-K \(File No. 001-32979\), filed on March 28, 2024\).](#)

**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.

Dated: April 2, 2024

**Santé Health Ventures I, LP**

By: SHV Management Services, LP  
its General Partner

By: SHV Management Services, LLC  
its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**SHV Management Services, LP**

By: SHV Management Services, LLC  
its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**SHV Management Services, LLC**

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**SHV MTEM SPV, LLC**

By: Santé Accel Ventures IV, LLC  
Its Managing Member

By: Santé Health Ventures IV, LP  
Its Managing Member

By: SHV Management Services IV, LP  
its General Partner

By: SHV Management Services IV, LLC  
its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**Santé Health Ventures I Annex Fund, LP**

By: SHV Annex Services, LP  
its General Partner

By: SHV Management Services, LLC  
its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**SHV Annex Services, LP**

By: SHV Management Services, LLC  
its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**Santé Accel Ventures IV, LLC**

By: Santé Health Ventures IV, LP  
Its Managing Member

By: SHV Management Services IV, LP  
its General Partner

By: SHV Management Services IV, LLC  
its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**Santé Health Ventures IV, LP**

By: SHV Management Services IV, LP  
its General Partner

By: SHV Management Services IV, LLC  
its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**SHV Management Services IV, LP**

By: SHV Management Services IV, LLC

**Joe H. Cunningham**

/s/ Joe H. Cunningham

**Douglas D. French**

/s/ Douglas D. French

**Kevin Lalande**

/s/ Kevin Lalande

its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**SHV Management Services IV, LLC**

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

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**Exhibit(s):**

[Exhibit 1](#)      [Joint Filing Agreement](#)

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EXHIBIT 1

JOINT FILING AGREEMENT

The undersigned hereby agree that a single Schedule 13D (or any amendment thereto) relating to the Common Stock of Molecular Templates, Inc. shall be filed on behalf of each of the undersigned and that this Agreement shall be filed as an exhibit to such Schedule 13D.

Dated: April 2, 2024

**Santé Health Ventures I, LP**

By: SHV Management Services, LP  
its General Partner

By: SHV Management Services, LLC  
its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**Santé Health Ventures I Annex Fund, LP**

By: SHV Annex Services, LP  
its General Partner

By: SHV Management Services, LLC  
its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**SHV Management Services, LP**

By: SHV Management Services, LLC  
its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**SHV Annex Services, LP**

By: SHV Management Services, LLC  
its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**SHV Management Services, LLC**

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**SHV MTEM SPV, LLC**

By: Santé Accel Ventures IV, LLC  
Its Managing Member

By: Santé Health Ventures IV, LP  
Its Managing Member

By: SHV Management Services IV, LP  
its General Partner

By: SHV Management Services IV, LLC  
its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**Santé Accel Ventures IV, LLC**

By: Santé Health Ventures IV, LP  
Its Managing Member

By: SHV Management Services IV, LP  
its General Partner

By: SHV Management Services IV, LLC  
its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**Santé Health Ventures IV, LP**

By: SHV Management Services IV, LP  
its General Partner

By: SHV Management Services IV, LLC  
its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**Joe H. Cunningham**

/s/ Joe H. Cunningham

**Douglas D. French**

/s/ Douglas D. French

**SHV Management Services IV, LP**

By: SHV Management Services IV, LLC  
its General Partner

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

**Kevin Lalande**

/s/ Kevin Lalande

**SHV Management Services IV, LLC**

By: /s/ Kevin Lalande  
Name: Kevin Lalande  
Title: Managing Director

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