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

**SCHEDULE 13G/A**

**UNDER THE SECURITIES EXCHANGE ACT OF 1934  
(Amendment No. 1)\***

**Milestone Pharmaceuticals Inc.**

(Name of Issuer)

**Common Shares, without par value  
(Title of Class of Securities)**

**59935V107  
(CUSIP Number)**

**December 31, 2022  
(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.	Name of reporting persons Venrock Healthcare Capital Partners III, L.P.	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input checked="" type="checkbox"/> <sup>1</sup> (b) <input type="checkbox"/>	
3.	SEC USE ONLY	
4.	Citizenship or Place of Organization Delaware	
Number of Shares Beneficially Owned by Each Reporting Person With:	5.	Sole Voting Power 0
	6.	Shared Voting Power 2,208,812 <sup>2</sup>
	7.	Sole Dispositive Power 0
	8.	Shared Dispositive Power 2,208,812 <sup>2</sup>
9.	Aggregate Amount Beneficially Owned by Each Reporting Person 2,208,812 <sup>2</sup>	
10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
11.	Percent of Class Represented by Amount in Row (9) 6.4% <sup>3</sup>	
12.	Type of Reporting Person (See Instructions) PN	

1 Venrock Healthcare Capital Partners III, L.P., VHCP Co-Investment Holdings III, LLC, Venrock Healthcare Capital Partners EG, L.P., VHCP Management III, LLC, VHCP Management EG, LLC, Nimish Shah and Bong Koh are members of a group for the purposes of this Schedule 13G.

2 Consists of (i) 580,701 shares held by Venrock Healthcare Capital Partners III, L.P., (ii) 58,085 shares held by VHCP Co-Investment Holdings III, LLC and (iii) 1,570,026 shares held by Venrock Healthcare Capital Partners EG, L.P.

3 This percentage is calculated based upon 34,286,002 of the Issuer's common shares outstanding as of November 10, 2022 as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 10, 2022.

1.	Name of reporting persons VHCP Co-Investment Holdings III, LLC	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input checked="" type="checkbox"/> <sup>1</sup> (b) <input type="checkbox"/>	
3.	SEC USE ONLY	
4.	Citizenship or Place of Organization Delaware	
Number of Shares Beneficially Owned by Each Reporting Person With:	5.	Sole Voting Power 0
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3 This percentage is calculated based upon 34,286,002 of the Issuer's common shares outstanding as of November 10, 2022 as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 10, 2022.

1.	Name of reporting persons Venrock Healthcare Capital Partners EG, L.P.	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input checked="" type="checkbox"/> <sup>1</sup> (b) <input type="checkbox"/>	
3.	SEC USE ONLY	
4.	Citizenship or Place of Organization Delaware	
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1.	Name of reporting persons VHCP Management III, LLC	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input checked="" type="checkbox"/> <sup>1</sup> (b) <input type="checkbox"/>	
3.	SEC USE ONLY	
4.	Citizenship or Place of Organization Delaware	
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1.	Name of reporting persons VHCP Management EG, LLC	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input checked="" type="checkbox"/> <sup>1</sup> (b) <input type="checkbox"/>	
3.	SEC USE ONLY	
4.	Citizenship or Place of Organization Delaware	
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2 Consists of (i) 580,701 shares held by Venrock Healthcare Capital Partners III, L.P., (ii) 58,085 shares held by VHCP Co-Investment Holdings III, LLC and (iii) 1,570,026 shares held by Venrock Healthcare Capital Partners EG, L.P.

3 This percentage is calculated based upon 34,286,002 of the Issuer's common shares outstanding as of November 10, 2022 as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 10, 2022.

1.	Name of Reporting Persons Shah, Nimish	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input checked="" type="checkbox"/> <sup>1</sup> (b) <input type="checkbox"/>	
3.	SEC USE ONLY	
4.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With:	5.	Sole Voting Power 0
	6.	Shared Voting Power 2,208,812 <sup>2</sup>
	7.	Sole Dispositive Power 0
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11.	Percent of Class Represented by Amount in Row (9) 6.4% <sup>3</sup>	
12.	Type of Reporting Person (See Instructions) IN	

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2 Consists of (i) 580,701 shares held by Venrock Healthcare Capital Partners III, L.P., (ii) 58,085 shares held by VHCP Co-Investment Holdings III, LLC and (iii) 1,570,026 shares held by Venrock Healthcare Capital Partners EG, L.P.

3 This percentage is calculated based upon 34,286,002 of the Issuer's common shares outstanding as of November 10, 2022 as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 10, 2022.

1.	Name of Reporting Persons Koh, Bong	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input checked="" type="checkbox"/> <sup>1</sup> (b) <input type="checkbox"/>	
3.	SEC USE ONLY	
4.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With:	5.	Sole Voting Power 0
	6.	Shared Voting Power 2,208,812 <sup>2</sup>
	7.	Sole Dispositive Power 0
	8.	Shared Dispositive Power 2,208,812 <sup>2</sup>
9.	Aggregate Amount Beneficially Owned by Each Reporting Person 2,208,812 <sup>2</sup>	
10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
11.	Percent of Class Represented by Amount in Row (9) 6.4% <sup>3</sup>	
12.	Type of Reporting Person (See Instructions) IN	

1 Venrock Healthcare Capital Partners III, L.P., VHCP Co-Investment Holdings III, LLC, Venrock Healthcare Capital Partners EG, L.P., VHCP Management III, LLC, VHCP Management EG, LLC, Nimish Shah and Bong Koh are members of a group for the purposes of this Schedule 13G.

2 Consists of (i) 580,701 shares held by Venrock Healthcare Capital Partners III, L.P., (ii) 58,085 shares held by VHCP Co-Investment Holdings III, LLC and (iii) 1,570,026 shares held by Venrock Healthcare Capital Partners EG, L.P.

3 This percentage is calculated based upon 34,286,002 of the Issuer's common shares outstanding as of November 10, 2022 as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 10, 2022.



Introductory Note: This Schedule 13G/A is filed on behalf of Venrock Healthcare Capital Partners III, L.P., a limited partnership organized under the laws of the State of Delaware (“VHCP III LP”), VHCP Co-Investment Holdings III, LLC, a limited liability company organized under the laws of the State of Delaware (“VHCP Co-Investment III”), Venrock Healthcare Capital Partners EG, L.P., a limited partnership organized under the laws of the State of Delaware (“VHCP EG”), VHCP Management III, LLC, a limited liability company organized under the laws of the State of Delaware (“VHCP Management III”), VHCP Management EG, LLC, a limited liability company organized under the laws of the State of Delaware (“VHCP Management EG” and collectively with VHCP III LP, VHCP Co-Investment III, VHCP EG and VHCP Management III, the “Venrock Entities”), Nimish Shah (“Shah”) and Bong Koh (“Koh”) in respect of Common Shares of Milestone Pharmaceuticals Inc.

**Item 1.**

## (a) Name of Issuer

Milestone Pharmaceuticals Inc.

## (b) Address of Issuer’s Principal Executive Offices

1111 Dr. Frederik-Philips Boulevard, Suite 420  
Montréal, Québec Canada H4M 2X6

**Item 2.**

## (a) Name of Person Filing

Venrock Healthcare Capital Partners III, L.P.  
VHCP Co-Investment Holdings III, LLC  
Venrock Healthcare Capital Partners EG, L.P.  
VHCP Management III, LLC  
VHCP Management EG, LLC  
Nimish Shah  
Bong Koh

## (b) Address of Principal Business Office or, if none, Residence

New York Office:

7 Bryant Park  
23rd Floor  
New York, NY 10018

Palo Alto Office:

3340 Hillview Avenue  
Palo Alto, CA 94304

## (c) Citizenship

All of the Venrock Entities were organized in Delaware. The individuals are both United States citizens.

## (d) Title of Class of Securities

Common Shares, without par value

## (e) CUSIP Number

59935V107

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**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:**

Not applicable

**Item 4. Ownership**

(a) Amount Beneficially Owned as of December 31, 2022:

Venrock Healthcare Capital Partners III, L.P.	2,208,812(1)
VHCP Co-Investment Holdings III, LLC	2,208,812(1)
Venrock Healthcare Capital Partners EG, L.P.	2,208,812(1)
VHCP Management III, LLC	2,208,812(1)
VHCP Management EG, LLC	2,208,812(1)
Nimish Shah	2,208,812(1)
Bong Koh	2,208,812(1)

(b) Percent of Class as of December 31, 2022:

Venrock Healthcare Capital Partners III, L.P.	6.4%
VHCP Co-Investment Holdings III, LLC	6.4%
Venrock Healthcare Capital Partners EG, L.P.	6.4%
VHCP Management III, LLC	6.4%
VHCP Management EG, LLC	6.4%
Nimish Shah	6.4%
Bong Koh	6.4%

(c) Number of shares as to which the person has, as of December 31, 2022:

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

Venrock Healthcare Capital Partners III, L.P.	0
VHCP Co-Investment Holdings III, LLC	0
Venrock Healthcare Capital Partners EG, L.P.	0
VHCP Management III, LLC	0
VHCP Management EG, LLC	0
Nimish Shah	0
Bong Koh	0

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

Venrock Healthcare Capital Partners III, L.P.	2,208,812(1)
VHCP Co-Investment Holdings III, LLC	2,208,812(1)
Venrock Healthcare Capital Partners EG, L.P.	2,208,812(1)
VHCP Management III, LLC	2,208,812(1)
VHCP Management EG, LLC	2,208,812(1)
Nimish Shah	2,208,812(1)
Bong Koh	2,208,812(1)

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

Venrock Healthcare Capital Partners III, L.P.	0
VHCP Co-Investment Holdings III, LLC	0
Venrock Healthcare Capital Partners EG, L.P.	0
VHCP Management III, LLC	0
VHCP Management EG, LLC	0
Nimish Shah	0
Bong Koh	0

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

Venrock Healthcare Capital Partners III, L.P.	2,208,812(1)
VHCP Co-Investment Holdings III, LLC	2,208,812(1)
Venrock Healthcare Capital Partners EG, L.P.	2,208,812(1)
VHCP Management III, LLC	2,208,812(1)
VHCP Management EG, LLC	2,208,812(1)
Nimish Shah	2,208,812(1)
Bong Koh	2,208,812(1)

(1) Consists of (i) 580,701 shares held by Venrock Healthcare Capital Partners III, L.P., (ii) 58,085 shares held by VHCP Co-Investment Holdings III, LLC and (iii) 1,570,026 shares held by Venrock Healthcare Capital Partners EG, L.P. VHCP Management III, LLC is the general partner of Venrock Healthcare Capital Partners III, L.P. and the manager of VHCP Co-Investment Holdings III, LLC. VHCP Management EG, LLC is the general partner of Venrock Healthcare Capital Partners EG, L.P. Messrs. Shah and Koh are the voting members of VHCP Management III, LLC and VHCP Management EG, LLC.

**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**

Not Applicable

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

Not Applicable

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

Not Applicable

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

Not Applicable

**Item 10. Certification**

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect, other than activities solely in connection with a nomination under § 240.14a-11.

**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: February 14, 2023

**Venrock Healthcare Capital Partners III, L.P.**

By: VHCP Management III, LLC  
Its: General Partner

By: /s/ David L. Stepp  
Name: David L. Stepp  
Its: Authorized Signatory

**VHCP Co-Investment Holdings III, LLC**

By: VHCP Management III, LLC  
Its: Manager

By: /s/ David L. Stepp  
Name: David L. Stepp  
Its: Authorized Signatory

**VHCP Management III, LLC**

By: /s/ David L. Stepp  
Name: David L. Stepp  
Its: Authorized Signatory

**Venrock Healthcare Capital Partners EG, L.P.**

By: VHCP Management EG, LLC  
Its: General Partner

By: /s/ David L. Stepp  
Name: David L. Stepp  
Its: Authorized Signatory

**VHCP Management EG, LLC**

By: /s/ David L. Stepp  
Name: David L. Stepp  
Its: Authorized Signatory

**Nimish Shah**

/s/ David L. Stepp  
David L. Stepp, Attorney-in-fact

**Bong Koh**

/s/ David L. Stepp  
David L. Stepp, Attorney-in-fact

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**EXHIBITS**

- A: Joint Filing Agreement (incorporated by reference to Exhibit A to the Schedule 13G filed with the Securities and Exchange Commission on September 20, 2022)
  - B: Power of Attorney for Nimish Shah (incorporated by reference to Exhibit B to Schedule 13G filed February 14, 2020)
  - C: Power of Attorney for Bong Koh (incorporated by reference to Exhibit C to Schedule 13G filed February 14, 2020)
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