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

## **SCHEDULE 13G/A**

UNDER THE SECURITIES EXCHANGE ACT OF 1934 (Amendment No. 2)\*

		Milestone Pharmaceuticals Inc.
		(Name of Issuer)
		Common Shares, without par value
		(Title of Class of Securities)
		59935V107
		(CUSIP Number)
		December 31, 2023
		(Date of Event Which Requires Filing of This Statement)
Ch	eck th	e appropriate box to designate the rule pursuant to which this Schedule is filed:
		Rule 13d-1(b)
	$\boxtimes$	Rule 13d-1(c)
		Rule 13d-1(d)
*		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 my subsequent amendment containing information which would alter the disclosures provided in a prior cover page.
of		mation 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" 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
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**CUSIP No. 59935V107** Page 2 of 13

Name of reporting persons

3

	venrock Healthcare Capital Partners III, L.P.					
2.	2. Check the Appropriate Box if a Member of a Group (See Instructions)					
	$(a) \boxtimes^1 (b) \square$					
3.	3. SEC USE ONLY					
4.	Citizens	ship or	Place of Organization			
	Delawa	re				
		5.	Sole Voting Power			
			0			
Number Shares	r of	6.	Shared Voting Power			
Benefic Owned	-		$925,048^2$			
Each	J	7.	Sole Dispositive Power			
Reporti Person			0			
		8.	Shared Dispositive Power			
			$925,048^2$			
9.	Aggrega	ate An	nount Beneficially Owned by Each Reporting Person			
	925,048	32				
10.	Check i	f the A	Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)			
11.	Percent	of Cla	ass Represented by Amount in Row (9)			
	2.8% <sup>3</sup>					
12.		Repo	rting Person (See Instructions)			
PN						
			re Capital Partners III, L.P., VHCP Co-Investment Holdings III, LLC, Venrock Healthcare Capital Partners EG, L.P., VHCP LC, VHCP Management EG, LLC, Nimish Shah and Bong Koh are members of a group for the purposes of this Schedule 13G/A.			
Consists of (i) 243,195 shares held by Venrock Healthcare Capital Partners III, L.P., (ii) 24,330 shares held by VHCP Co-Investment Holdings III, LLC and (iii) 657,523 shares held by Venrock Healthcare Capital Partners EG, L.P.						

This percentage is calculated based upon 33,483,111 of the Issuer's common shares outstanding as of November 13, 2023 as reported in the Issuer's

Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 13, 2023.

**CUSIP No. 59935V107** Page 3 of 13

1.	Name of reporting persons					
	VHCP	Co-Inv	vestment Holdings III, LLC			
2.	Check t	he Ap	propriate Box if a Member of a Group (See Instructions)			
3.	SEC US	SE ON	ILY			
4.	Citizens	ship or	Place of Organization			
	Delawa	re				
		5.	Sole Voting Power			
			0			
Number Shares	r of	6.	Shared Voting Power			
Benefic			$925,048^2$			
Owned Each	by	7.	Sole Dispositive Power			
Reporti Person						
1 CISOII	WILII.	8.	Shared Dispositive Power			
			$925,048^2$			
9.	Aggrega	Aggregate Amount Beneficially Owned by Each Reporting Person				
	$925,048^2$					
10.			Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)			
11.	Percent	of Cla	ass Represented by Amount in Row (9)			
	2.8% <sup>3</sup>	$2.8\%^{3}$				
12.	Type of	Repo	rting Person (See Instructions)			
	00					

- 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/A.
- Consists of (i) 243,195 shares held by Venrock Healthcare Capital Partners III, L.P., (ii) 24,330 shares held by VHCP Co-Investment Holdings III, LLC and (iii) 657,523 shares held by Venrock Healthcare Capital Partners EG, L.P.
- This percentage is calculated based upon 33,483,111 of the Issuer's common shares outstanding as of November 13, 2023 as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 13, 2023.

CUSIP No. 59935V107 Page 4 of 13

1.	Name of reporting persons				
	Venrock Healthcare Capital Partners EG, L.P.				
2.	Check t	he Ap	propriate Box if a Member of a Group (See Instructions)		
	(a) ⊠¹	(b)			
3.	SEC US	SE ON	ILY		
4.	Citizens	ship or	Place of Organization		
	Delawa	re			
		5.	Sole Voting Power		
			0		
Number Shares	r of	6.	Shared Voting Power		
Benefic Owned			$925,048^2$		
Each	-	7.	Sole Dispositive Power		
Reporting Person With:			0		
		8.	Shared Dispositive Power		
			$925,048^2$		
9.	Aggrega	ate An	nount Beneficially Owned by Each Reporting Person		
	925,048	32			
10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) □		Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)			
11. Percent of Class Represented by Amount in Row (9)		ass Represented by Amount in Row (9)			
	2.8% <sup>3</sup>				
12.		Repo	rting Person (See Instructions)		
PN					

- 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/A.
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- This percentage is calculated based upon 33,483,111 of the Issuer's common shares outstanding as of November 13, 2023 as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 13, 2023.

CUSIP No. 59935V107 Page 5 of 13

Name of reporting persons

	VHCP Management III, LLC					
2.	. Check the Appropriate Box if a Member of a Group (See Instructions)					
	(a) $\boxtimes^1$ (b) $\square$					
3.	SEC US	SE ON	ILY			
4	Citizenship or Place of Organization					
4.		-	Place of Organization			
	Delawa	re				
		5.	Sole Voting Power			
			0			
Numbe Shares	r of	6.	Shared Voting Power			
Benefic			$925,048^2$			
Owned Each	by	7.	Sole Dispositive Power			
Reporti Person			0			
reison with.		8.	Shared Dispositive Power			
			$925,048^2$			
9. Aggregate Amount Beneficially Owned by Each Reporting Person			nount Beneficially Owned by Each Reporting Person			
	925,048	32				
10.	Check i	f the A	Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)			
11.	Percent	of Cla	ass Represented by Amount in Row (9)			
	$2.8\%^{3}$					
12.		Repo	rting Person (See Instructions)			
	00					
<u> </u>						
Ma	nagement	III, L	LC, VHCP Management EG, LLC, Nimish Shah and Bong Koh are members of a group for the purposes of this Schedule 13G/A.			

- 2 Consists of (i) 243,195 shares held by Venrock Healthcare Capital Partners III, L.P., (ii) 24,330 shares held by VHCP Co-Investment Holdings III, LLC and (iii) 657,523 shares held by Venrock Healthcare Capital Partners EG, L.P.
- 3 This percentage is calculated based upon 33,483,111 of the Issuer's common shares outstanding as of November 13, 2023 as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 13, 2023.

**CUSIP No. 59935V107** Page 6 of 13

1.	1. Name of reporting persons					
	VHCP I	Manag	gement EG, LLC			
2.	Check t	Check the Appropriate Box if a Member of a Group (See Instructions)				
	(a) ⊠ <sup>1</sup>	(b)				
3.	SEC US					
4.	Citizens	ship or	Place of Organization			
	Delawa	re				
		5.	Sole Voting Power			
			0			
Numbe Shares	r of	6.	Shared Voting Power			
Benefic Owned			925,048 <sup>2</sup>			
Each	,	7.	Sole Dispositive Power			
Reporti Person			0			
		8.	Shared Dispositive Power			
			925,048 <sup>2</sup>			
9.	Aggrega	Aggregate Amount Beneficially Owned by Each Reporting Person				
	925,048	32				
10.	Check i	f the A	aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)			
11. Percent of Class Represented by Amount in Row (9)		ass Represented by Amount in Row (9)				
	2.8% <sup>3</sup>	80/3				
12.		Type of Reporting Person (See Instructions)				
00						
	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/A.
- 2 Consists of (i) 243,195 shares held by Venrock Healthcare Capital Partners III, L.P., (ii) 24,330 shares held by VHCP Co-Investment Holdings III, LLC and (iii) 657,523 shares held by Venrock Healthcare Capital Partners EG, L.P.
- This percentage is calculated based upon 33,483,111 of the Issuer's common shares outstanding as of November 13, 2023 as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 13, 2023.

**CUSIP No. 59935V107** Page 7 of 13

Name of Reporting Persons

Shah, Nimish

3

2.	2. Check the Appropriate Box if a Member of a Group (See Instructions)				
	$(a) \boxtimes^1$ $(b) \square$				
3.	3. SEC USE ONLY				
4. Citizenship or Place of Organization			Place of Organization		
United States					
		5.	Sole Voting Power		
			0		
Number Shares	r of	6.	Shared Voting Power		
Benefic Owned			$925,048^2$		
Each	,	7.	Sole Dispositive Power		
Reporti Person			0		
		8.	Shared Dispositive Power		
			$925,048^2$		
Aggregate Amount Beneficially Owned by Each Reporting Person		nount Beneficially Owned by Each Reporting Person			
	925,048	32			
10.	Check i	f the A	Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)		
11.	Percent	of Cla	ass Represented by Amount in Row (9)		
	2.8% <sup>3</sup>				
12.	Type of	Repo	rting Person (See Instructions)		
	IN				
			re Capital Partners III, L.P., VHCP Co-Investment Holdings III, LLC, Venrock Healthcare Capital Partners EG, L.P., VHCP LC, VHCP Management EG, LLC, Nimish Shah and Bong Koh are members of a group for the purposes of this Schedule 13G/A.		
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Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 13, 2023.

**CUSIP No. 59935V107** Page 8 of 13

1. Name of Reporting Persons

3

	Koh, Bong				
2.	2. Check the Appropriate Box if a Member of a Group (See Instructions)				
(a) ⊠¹ (b) □					
3.	SEC US	SE ON	LY		
4.	4. Citizenship or Place of Organization				
	United S	States			
		5.	Sole Voting Power		
			0		
Number Shares	r of	6.	Shared Voting Power		
Benefic			$925,048^2$		
Owned Each		7.	Sole Dispositive Power		
Reporti Person			0		
Telboli With.		8.	Shared Dispositive Power		
			$925,048^2$		
9.	Aggrega	ate An	nount Beneficially Owned by Each Reporting Person		
	925,048	2			
10.	Check i	f the A	Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)		
11.	Percent	of Cla	ass Represented by Amount in Row (9)		
	2.8% <sup>3</sup>				
12.		Repo	rting Person (See Instructions)		
	IN				
	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/A.				
Consists of (i) 243,195 shares held by Venrock Healthcare Capital Partners III, L.P., (ii) 24,330 shares held by VHCP Co-Investment Holdings III, LLC and (iii) 657,523 shares held by Venrock Healthcare Capital Partners EG, L.P.					

This percentage is calculated based upon 33,483,111 of the Issuer's common shares outstanding as of November 13, 2023 as reported in the Issuer's

Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 13, 2023.

CUSIP No. 59935V107 Page 9 of 13

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: Palo Alto Office:

7 Bryant Park 3340 Hillview Avenue 23rd Floor Palo Alto, CA 94304

New York, NY 10018

(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

CUSIP No. 59935V107 Page 10 of 13

## 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, 2023:

Venrock Healthcare Capital Partners III, L.P.	925,048(1)
VHCP Co-Investment Holdings III, LLC	925,048(1)
Venrock Healthcare Capital Partners EG, L.P.	925,048(1)
VHCP Management III, LLC	925,048(1)
VHCP Management EG, LLC	925,048(1)
Nimish Shah	925,048(1)
Bong Koh	925,048(1)

(b) Percent of Class as of December 31, 2023:

Venrock Healthcare Capital Partners III, L.P.	2.8%
VHCP Co-Investment Holdings III, LLC	2.8%
Venrock Healthcare Capital Partners EG, L.P.	2.8%
VHCP Management III, LLC	2.8%
VHCP Management EG, LLC	2.8%
Nimish Shah	2.8%
Bong Koh	2.8%

- (c) Number of shares as to which the person has, as of December 31, 2023:
- (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.	925,048(1)
VHCP Co-Investment Holdings III, LLC	925,048(1)
Venrock Healthcare Capital Partners EG, L.P.	925,048(1)
VHCP Management III, LLC	925,048(1)
VHCP Management EG, LLC	925,048(1)
Nimish Shah	925,048(1)
Rong Koh	925 048(1)

CUSIP No. 59935V107 Page 11 of 13

(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.	925,048(1)
VHCP Co-Investment Holdings III, LLC	925,048(1)
Venrock Healthcare Capital Partners EG, L.P.	925,048(1)
VHCP Management III, LLC	925,048(1)
VHCP Management EG, LLC	925,048(1)
Nimish Shah	925,048(1)
Bong Koh	925,048(1)

(1) Consists of (i) 243,195 shares held by Venrock Healthcare Capital Partners III, L.P., (ii) 24,330 shares held by VHCP Co-Investment Holdings III, LLC and (iii) 657,523 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  $\boxtimes$ .

#### 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.

**CUSIP No. 59935V107** Page 12 of 13

### **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, 2024

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

By: VHCP Management III, LLC

Its: General Partner

By: /s/ Sherman G. Souther

Name: Sherman G. Souther Its: Authorized Signatory

### VHCP Co-Investment Holdings III, LLC

By: VHCP Management III, LLC

Its: Manager

By: /s/ Sherman G. Souther

Name: Sherman G. Souther Its: Authorized Signatory

### VHCP Management III, LLC

By: /s/ Sherman G. Souther

Name: Sherman G. Souther Its: Authorized Signatory

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

By: VHCP Management EG, LLC

Its: General Partner

By: /s/ Sherman G. Souther

Name: Sherman G. Souther Its: Authorized Signatory

# VHCP Management EG, LLC

By: /s/ Sherman G. Souther

Name: Sherman G. Souther Its: Authorized Signatory

### Nimish Shah

/s/ Sherman G. Souther

Sherman G. Souther, Attorney-in-fact

## Bong Koh

/s/ Sherman G. Souther

Sherman G. Souther, Attorney-in-fact

CUSIP No. 59935V107 Page 13 of 13

## **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)
- <u>C:</u> Power of Attorney for Bong Koh (incorporated by reference to Exhibit C to Schedule 13G filed February 14, 2020)