
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934

(Amendment No. 7)*

REPARE THERAPEUTICS INC.

(Name of Issuer)

Common Shares

(Title of Class of Securities)

760273102

(CUSIP Number)

Ansbert Gadicke
c/o MPM BioImpact LLC, 339 Boylston Street, Suite 1100
Boston, MA, 02116
617-425-9200

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

01/31/2025

(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.

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).

SCHEDULE 13D

CUSIP No. 760273102

Name of reporting person

1

MPM BioVentures 2014, L.P.

2

Check the appropriate box if a member of a Group (See Instructions)

(a)
 (b)

3 SEC use only
Source of funds (See Instructions)

4 WC
Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5
Citizenship or place of organization

6 DELAWARE
Sole Voting Power

7 1,018,345.00
Number of Shares Beneficially Owned by Each Reporting Person With: Shared Voting Power

8 0.00
Sole Dispositive Power

9 1,018,345.00
Shared Dispositive Power

10 0.00
Aggregate amount beneficially owned by each reporting person

11 1,018,345.00
Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12
Percent of class represented by amount in Row (11)

13 2.4 %
Type of Reporting Person (See Instructions)

14 PN

SCHEDULE 13D

CUSIP No. 760273102

1 Name of reporting person
MPM BioVentures 2014 (B), L.P.
Check the appropriate box if a member of a Group (See Instructions)

2 (a)
 (b)

3 SEC use only
Source of funds (See Instructions)

4 WC
Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5
Citizenship or place of organization

6 DELAWARE
Sole Voting Power

7 Number of

Shares	
Beneficially	67,921.00
Owned by	Shared Voting Power
Each	8
Reporting	0.00
Person	Sole Dispositive Power
With:	9
	67,921.00
	Shared Dispositive Power
	10
	0.00
	Aggregate amount beneficially owned by each reporting person
11	67,921.00
	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)
12	<input type="checkbox"/>
	Percent of class represented by amount in Row (11)
13	0.2 %
	Type of Reporting Person (See Instructions)
14	PN

SCHEDULE 13D

CUSIP No. 760273102

1	Name of reporting person
	MPM Asset Management Investors BV2014 LLC
	Check the appropriate box if a member of a Group (See Instructions)
2	<input type="checkbox"/> (a)
	<input checked="" type="checkbox"/> (b)
3	SEC use only
	Source of funds (See Instructions)
4	WC
	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)
5	<input type="checkbox"/>
	Citizenship or place of organization
6	DELAWARE
	Sole Voting Power
7	35,052.00
Number of	Shared Voting Power
Shares	8
Beneficially	0.00
Owned by	Sole Dispositive Power
Each	9
Reporting	35,052.00
Person	Shared Dispositive Power
With:	10
	0.00
11	Aggregate amount beneficially owned by each reporting person

35,052.00

Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12

Percent of class represented by amount in Row (11)

13

0.1 %

Type of Reporting Person (See Instructions)

14

OO

SCHEDULE 13D

CUSIP No. 760273102

Name of reporting person

1

UBS Oncology Impact Fund L.P.

Check the appropriate box if a member of a Group (See Instructions)

2

(a)

(b)

3

SEC use only

Source of funds (See Instructions)

4

WC

Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5

Citizenship or place of organization

6

CAYMAN ISLANDS

Sole Voting Power

7

819,924.00

Number of
Shares

Shared Voting Power

Beneficially 8

0.00

Owned by

Each

Sole Dispositive Power

Reporting 9

819,924.00

Person

With:

Shared Dispositive Power

10

0.00

Aggregate amount beneficially owned by each reporting person

11

819,924.00

Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12

Percent of class represented by amount in Row (11)

13

1.9 %

Type of Reporting Person (See Instructions)

14

PN

SCHEDULE 13D

CUSIP No. 760273102

1 Name of reporting person
MPM BioVentures 2014 GP LLC
Check the appropriate box if a member of a Group (See Instructions)

2 (a)
 (b)

3 SEC use only
Source of funds (See Instructions)

4 WC
Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5
Citizenship or place of organization

6 DELAWARE

7 Sole Voting Power
0.00

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person
With:

8 Shared Voting Power
1,086,266.00

9 Sole Dispositive Power
0.00

10 Shared Dispositive Power
1,086,266.00

11 Aggregate amount beneficially owned by each reporting person
1,086,266.00

12 Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

13
Percent of class represented by amount in Row (11)
2.6 %

14 Type of Reporting Person (See Instructions)
OO

SCHEDULE 13D

CUSIP No. 760273102

1 Name of reporting person
MPM BioVentures 2014 LLC
Check the appropriate box if a member of a Group (See Instructions)

2 (a)
 (b)

3 SEC use only
Source of funds (See Instructions)

4 WC
Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5
Citizenship or place of organization

6 DELAWARE

7 Sole Voting Power

Number of Shares Beneficially Owned by Each Reporting Person With: 8 0.00
Shared Voting Power

9 1,121,318.00
Sole Dispositive Power

10 0.00
Shared Dispositive Power

11 1,121,318.00
Aggregate amount beneficially owned by each reporting person

12 Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

13
Percent of class represented by amount in Row (11)

14 2.6 %
Type of Reporting Person (See Instructions)

OO

SCHEDULE 13D

CUSIP No. 760273102

1 Name of reporting person
Oncology Impact Fund (Cayman) Management L.P.
Check the appropriate box if a member of a Group (See Instructions)

2 (a)
 (b)

3 SEC use only
Source of funds (See Instructions)

4 WC
Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5
Citizenship or place of organization

6 CAYMAN ISLANDS

Number of Shares Beneficially Owned by Each Reporting Person With: 7 Sole Voting Power
0.00

Owned by Each Reporting Person With: 8 Shared Voting Power
819,924.00
Sole Dispositive Power
9
0.00
Shared Dispositive Power
10
819,924.00

11 Aggregate amount beneficially owned by each reporting person

819,924.00

12 Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

Percent of class represented by amount in Row (11)

13 1.9 %

14 Type of Reporting Person (See Instructions)

PN

SCHEDULE 13D

CUSIP No. 760273102

1 Name of reporting person

MPM BioImpact LLC

Check the appropriate box if a member of a Group (See Instructions)

2 (a)

(b)

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)

6 Citizenship or place of organization

DELAWARE

Sole Voting Power

7

0.00

Shared Voting Power

8

819,924.00

Sole Dispositive Power

9

0.00

Shared Dispositive Power

10

819,924.00

11 Aggregate amount beneficially owned by each reporting person

819,924.00

12 Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

Percent of class represented by amount in Row (11)
13 1.9 %
Type of Reporting Person (See Instructions)
14 OO

SCHEDULE 13D

CUSIP No. 760273102

1 Name of reporting person
ANSBERT GADICKE
Check the appropriate box if a member of a Group (See Instructions)
2 (a)
 (b)
3 SEC use only
Source of funds (See Instructions)
4 WC
Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)
5
Citizenship or place of organization
6 UNITED STATES
Sole Voting Power
7 0.00
Number of Shares Beneficially Owned by Each Reporting Person With:
8 Shared Voting Power
1,941,242.00
Sole Dispositive Power
9 0.00
Shared Dispositive Power
10 1,941,242.00
Aggregate amount beneficially owned by each reporting person
11 1,941,242.00
Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)
12
Percent of class represented by amount in Row (11)
13 4.6 %
Type of Reporting Person (See Instructions)
14 IN

SCHEDULE 13D

1 Name of reporting person
LUKE EVNIN
Check the appropriate box if a member of a Group (See Instructions)

2 (a)
 (b)

3 SEC use only
Source of funds (See Instructions)

4 WC
Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5

6 Citizenship or place of organization
UNITED STATES
Sole Voting Power
7
0.00
Number of Shares Beneficially Owned by Each Reporting Person With:
8 Shared Voting Power
1,121,318.00
9 Sole Dispositive Power
0.00
10 Shared Dispositive Power
1,121,318.00
Aggregate amount beneficially owned by each reporting person
11
1,121,318.00
Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12

13 Percent of class represented by amount in Row (11)
2.6 %

14 Type of Reporting Person (See Instructions)
IN

SCHEDULE 13D

1 Name of reporting person
Todd Foley
Check the appropriate box if a member of a Group (See Instructions)

2 (a)
 (b)

3 SEC use only
Source of funds (See Instructions)

4

WC

Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5



Citizenship or place of organization

6

UNITED STATES

Sole Voting Power

7

0.00

Number of
Shares

Shared Voting Power

Beneficially 8

Owned by

1,121,318.00

Each

Sole Dispositive Power

Reporting 9

Person

0.00

With:

Shared Dispositive Power

10

1,121,318.00

Aggregate amount beneficially owned by each reporting person

11

1,121,318.00

Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12



Percent of class represented by amount in Row (11)

13

2.6 %

Type of Reporting Person (See Instructions)

14

IN

SCHEDULE 13D

Item 1. Security and Issuer

Title of Class of Securities:

(a)

Common Shares

Name of Issuer:

(b)

REPARE THERAPEUTICS INC.

Address of Issuer's Principal Executive Offices:

(c)

7171 FREDERICK BANTING, SUITE 270, BUILDING 2, SAINT-LAURENT, QUEBEC, CANADA , H4S 1Z9.

Item 1 Explanatory Note: This Amendment No. 7 to Schedule 13D ('Amendment No. 7') is being filed as an amendment to
Comment: the initial statement on Schedule 13D relating to the common shares (the 'Common Shares'), of Repare Therapeutics Inc. (the 'Issuer'), as filed with the Securities and Exchange Commission (the 'SEC') on July 6, 2020, as amended by Amendment No. 1 filed March 23, 2021, Amendment No. 2 filed May 25, 2021, Amendment No. 3 filed July 21, 2021, Amendment No. 4 filed December 26, 2024, Amendment No. 5 filed January 6, 2025 and Amendment No. 6 filed January 15, 2025 (as amended, the 'Original Schedule 13D'). This Schedule 13D/A is being filed by the Filing Persons to report the open market sales of the Issuer's Common Shares by certain Filing Persons. Items 5 and 7 of the Original Schedule 13D are hereby amended and supplemented to the extent hereinafter expressly set forth and, except as amended and supplemented hereby, the Original Schedule 13D remains in full force and effect. All capitalized terms used in this Amendment No. 7 but not defined herein shall have the meanings ascribed thereto in the Original Schedule 13D.

Item 5. Interest in Securities of the Issuer

(a)

See rows (11) and (13) of the Filing Persons Owner Profile of this Amendment No. 7 for the aggregate number of Common Shares and percentages of the shares of Common Shares beneficially owned by the Filing Person. The Common Shares are held as follows: * 1,018,345 shares are held directly by BV 2014; * 67,921 shares are held directly by BV 2014(B); * 35,052 shares are held directly by AM BV2014 LLC; and * 819,924 shares are held

directly by UBS Oncology. BV 2014 GP and BV 2014 LLC are the direct and indirect general partners of BV 2014 and BV 2014(B) and, accordingly, may be deemed to beneficially own the shares held by BV 2014 and BV 2014(B). BV 2014 LLC is the managing member of AM BV2014 LLC and, accordingly, may be deemed to beneficially own the shares held by AM BV2014 LLC. BioImpact and Oncology Cayman are the direct and indirect general partners of UBS Oncology and, accordingly, may be deemed to beneficially own the shares held by UBS Oncology. Drs. Gadické and Evin and Mr. Foley are the managing directors of BV 2014 LLC and, accordingly, may be deemed to beneficially own the shares held by BV 2014, BV 2014(B) and AM BV2014 LLC. Dr. Gadické is the managing partner of BioImpact and, accordingly may be deemed to beneficially own the shares held by UBS Oncology. Calculation of the percentage of the shares of Common Shares beneficially owned is based upon 42,510,708 Common Shares outstanding as of November 1, 2024, as reported in the Issuer's Form 10-Q filed with the SEC on November 7, 2024.

(b) See rows (7) through (10) of the Filing Persons Owner Profile of this Amendment No. 7 for the number of shares as to which there is sole power to vote or to direct the vote, sole power to dispose or to direct the disposition, or shared power to dispose or to direct the disposition.

(c) The Filing Persons sold the following Common Shares in the open market since the date of filing Amendment No. 6:
 Date of Sale Price Range Ave. Price Sold by Sold by Sold By AM BV Sold by BV 2014 BV 2104(B) 2014 LLC UBS Oncology
 1/16/25 \$1.255-\$1.32 \$1.27 10,326 689 356 8,314 1/17/25 \$1.2599-\$1.2901 \$1.28 20,071 1,339 690
 16,160 1/21/25 \$1.22-\$1.31 \$1.24 16,024 1,069 551 12,902 1/22/25 \$1.20-\$1.235 \$1.22 19,017 1,268 655 15,312
 1/23/25 \$1.155-\$1.22 \$1.20 21,705 1,448 746 17,476 1/24/25 \$1.20-\$1.26 \$1.23 5,796 387 199 4,667 1/27/25
 \$1.15-\$1.2034 \$1.18 16,265 1,085 560 13,096

(d) Inapplicable.

(e) All Filing Persons ceased to be the beneficial owners of more than five percent of the Common Shares on January 17, 2025.

Item 7. Material to be Filed as Exhibits.
 Joint Filing Statement

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.

MPM BioVentures 2014, L.P.

Signature: /s/ Ansbert Gadické
 Managing Director of MPM BioVentures 2014
 Name/Title: LLC, the Managing Member of MPM
 BioVentures 2014 GP LLC, the General Partner of
 MPM BioVentures 2014, L.P.
 Date: 01/31/2025

MPM BioVentures 2014 (B), L.P.

Signature: /s/ Ansbert Gadické
 Managing Director of MPM BioVentures 2014
 Name/Title: LLC, Managing Member of MPM BioVentures
 2014 GP LLC, the General Partner of MPM
 BioVentures 2014 (B), L.P.
 Date: 01/31/2025

MPM Asset Management Investors BV2014 LLC

Signature: /s/ Ansbert Gadické
 Managing Director of MPM BioVentures 2014
 Name/Title: LLC, the manager of MPM Asset Management
 Investors BV2014 LLC
 Date: 01/31/2025

UBS Oncology Impact Fund L.P.

Signature: /s/ Ansbert Gadické
 Managing Partner of MPM BioImpact LLC, the
 Name/Title: GP of Oncology Impact Fund (Cayman)
 Management L.P., the GP of UBS Oncology
 Impact Fund L.P.
 Date: 01/31/2025

MPM BioVentures 2014 GP LLC

Signature: /s/ Ansbert Gadicke
Managing Director of MPM BioVentures 2014
Name/Title: LLC, the Managing Member of MPM
BioVentures 2014 GP LLC
Date: 01/31/2025

MPM BioVentures 2014 LLC

Signature: /s/ Ansbert Gadicke
Name/Title: Managing Director
Date: 01/31/2025

Oncology Impact Fund (Cayman) Management L.P.

Signature: /s/ Ansbert Gadicke
Managing Partner of MPM BioImpact LLC, the
Name/Title: General Partner of Oncology Impact Fund
(Cayman) Management L.P.
Date: 01/31/2025

MPM BioImpact LLC

Signature: /s/ Ansbert Gadicke
Name/Title: Managing Partner
Date: 01/31/2025

ANSBERT GADICKE

Signature: /s/ Ansbert Gadicke
Name/Title: Ansbert Gadicke
Date: 01/31/2025

LUKE EVNIN

Signature: /s/ Luke Evnin
Name/Title: Luke Evnin
Date: 01/31/2025

Todd Foley

Signature: /s/ Todd Foley
Name/Title: Todd Foley
Date: 01/31/2025

Joint Filing Statement

I, the undersigned, hereby express my agreement that the attached Schedule 13D (and any amendments thereto) relating to the beneficial ownership by the undersigned of the equity securities of Repare Therapeutics Inc. is filed on behalf of each of the undersigned.

Date: January 31, 2025

MPM BioVentures 2014, L.P.

By: MPM BioVentures 2014 GP LLC,
its General Partner

By: MPM BioVentures 2014 LLC,
Its Managing Member

By: /s/ Ansbert Gadicke

Name: Ansbert Gadicke

Title: Managing Director

MPM BioVentures 2014 (B), L.P.

By: MPM BioVentures 2014 GP LLC,
its General Partner

By: MPM BioVentures 2014 LLC,
Its Managing Member

By: /s/ Ansbert Gadicke

Name: Ansbert Gadicke

Title: Managing Director

MPM Asset Management Investors BV 2014 LLC

By: MPM BioVentures 2014 LLC
Its: Manager

By: /s/ Ansbert Gadicke

Name: Ansbert Gadicke

Title: Managing Director



MPM BioVentures 2014 GP, LLC

By: MPM BioVentures 2014 LLC,
Its Managing Member

By: /s/ Ansbert Gadicke
Name: Ansbert Gadicke
Title: Managing Director

MPM BioVentures 2014 LLC

By: /s/ Ansbert Gadicke
Name: Ansbert Gadicke
Title: Managing Director

UBS Oncology Impact Fund, L.P.

By: Oncology Impact Fund (Cayman) Management L.P.,
its General Partner
By: MPM BioImpact LLC,
Its General Partner

By: /s/ Ansbert Gadicke
Name: Ansbert Gadicke
Title: Managing Partner

Oncology Impact Fund (Cayman) Management L.P.

By: MPM BioImpact LLC,
Its General Partner

By: /s/ Ansbert Gadicke
Name: Ansbert Gadicke
Title: Managing Partner

MPM BioImpact LLC

By: /s/ Ansbert Gadicke
Name: Ansbert Gadicke
Title: Managing Partner

By: /s/ Todd Foley
Name: Todd Foley

By: /s/ Luke Evnin
Name: Luke Evnin

By: /s/ Ansbert Gadicke
Name: Ansbert Gadicke