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

SCHEDULE 13D

Under the Securities Exchange Act of 1934

Repare Therapeutics Inc.

(Name of Issuer)

COMMON STOCK

(Title of Class of Securities)

760273102

(CUSIP Number)

OrbiMed Advisors LLC

OrbiMed Capital GP VII LLC

OrbiMed Capital LLC

**601 Lexington Avenue, 54th Floor
New York, NY 10022
Telephone: (212) 739-6400**

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

June 19, 2020

(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 §240.13d-7(b) 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. 760273102

1	Names of Reporting Persons. OrbiMed Advisors LLC	
2	Check the Appropriate Box if a Member of a Group (See Instructions). (a) <input type="checkbox"/> (b) <input 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 Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	Sole Voting Power 0
	8	Shared Voting Power 3,276,325
	9	Sole Dispositive Power 0
	10	Shared Dispositive Power 3,276,325
11	Aggregate Amount Beneficially Owned by Each Reporting Person 3,276,325	
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) 8.9%*	
14	Type of Reporting Person (See Instructions) IA	

* This percentage is calculated based upon 36,668,085 shares of common stock outstanding of Repare Therapeutics Inc. (the "Issuer"), as set forth in the Issuer's Rule 424(b)(4) Prospectus filed with the Securities and Exchange Commission ("SEC") on June 19, 2020 and giving effect to the additional 1,650,000 shares of common stock issued and sold by the Issuer to the underwriters pursuant to the underwriters' option.

CUSIP No. 760273102

1	Names of Reporting Persons. OrbiMed Capital GP VII LLC	
2	Check the Appropriate Box if a Member of a Group (See Instructions). (a) <input type="radio"/> (b) <input type="radio"/>	
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) 0	
6	Citizenship or Place of Organization Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	Sole Voting Power 0
	8	Shared Voting Power 3,276,325
	9	Sole Dispositive Power 0
	10	Shared Dispositive Power 3,276,325
11	Aggregate Amount Beneficially Owned by Each Reporting Person 3,276,325	
12	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) 0	
13	Percent of Class Represented by Amount in Row (11) 8.9%*	
14	Type of Reporting Person (See Instructions) OO	

* This percentage is calculated based upon 36,668,085 shares of common stock outstanding of Repare Therapeutics Inc. (the "Issuer"), as set forth in the Issuer's Rule 424(b)(4) Prospectus filed with the Securities and Exchange Commission ("SEC") on June 19, 2020 and giving effect to the additional 1,650,000 shares of common stock issued and sold by the Issuer to the underwriters pursuant to the underwriters' option.

CUSIP No. 760273102

1	Names of Reporting Persons. OrbiMed Capital LLC		
2	Check the Appropriate Box if a Member of a Group (See Instructions). (a) <input type="radio"/> (b) <input type="radio"/>		
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) 0		
6	Citizenship or Place of Organization Cayman Islands		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	Sole Voting Power 150,000	
	8	Shared Voting Power 0	
	9	Sole Dispositive Power 150,000	
	10	Shared Dispositive Power 0	
11	Aggregate Amount Beneficially Owned by Each Reporting Person 150,000		
12	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) 0		
13	Percent of Class Represented by Amount in Row (11) 0.4%*		
14	Type of Reporting Person (See Instructions) IA		

* This percentage is calculated based upon 36,668,085 shares of common stock outstanding of Repare Therapeutics Inc. (the "Issuer"), as set forth in the Issuer's Rule 424(b)(4) Prospectus filed with the Securities and Exchange Commission ("SEC") on June 19, 2020 and giving effect to the additional 1,650,000 shares of common stock issued and sold by the Issuer to the underwriters pursuant to the underwriters' option.

Item 1. Security and Issuer

This Schedule 13D (the “Statement”) relates to the common stock, par value \$0.001 per share (the “Shares”) of Repare Therapeutics Inc., a corporation organized under the Business Corporations Act (Québec) (the “Issuer”), with its principal executive offices located at 7210 Frederick-Banting, Suite 100, Montréal, Québec, Canada H4S 2A1. The Shares are listed on the NASDAQ Global Market under the ticker symbol “RPTX” .. Information given in response to each item shall be deemed incorporated by reference in all other items, as applicable.

On June 12, 2020, the Issuer effected a reverse stock-split at a ratio of 1-for-6.062 (the “Reverse Stock Split”). References in this Statement to numbers of Shares and exercise prices give effect to the Reverse Stock Split.

On June 23, 2020, the Issuer completed its initial public offering pursuant to which the Issuer agreed to issue and sell to the participants 11,000,000 Shares (the “IPO”). In addition, the Issuer granted the underwriters an option to purchase, at the public offering price less any underwriting discounts and commissions, up to an additional 1,650,000 Shares. The purchase price for each Share was \$20.00. As a result of the IPO, and the underwriters exercise of their option, the Issuer’s total number of outstanding Shares increased to 36,668,085.

Item 2. Identity and Background

(a) This Schedule 13D is being filed by OrbiMed Advisors LLC (“OrbiMed Advisors”), OrbiMed Capital GP VII LLC (“OrbiMed GP”) and OrbiMed Capital LLC (“OrbiMed Capital”) (collectively, the “Reporting Persons”).

(b) — (c), (f) OrbiMed Advisors, a limited liability company organized under the laws of Delaware and a registered investment adviser under the Investment Advisers Act of 1940, as amended, is the managing member or general partner of certain entities as more particularly described in Item 6 below. OrbiMed Advisors has its principal offices at 601 Lexington Avenue, 54th Floor, New York, New York 10022.

OrbiMed GP, a limited liability company organized under the laws of Delaware, is the general partner of a limited partnership as more particularly described in Item 6 below. OrbiMed GP has its principal offices at 601 Lexington Avenue, 54th Floor, New York, New York 10022.

OrbiMed Capital, a limited liability company organized under the laws of Delaware and a registered investment adviser under the Investment Advisers Act of 1940, as amended, is the investment adviser of certain entities as more particularly described in Item 6 below. OrbiMed Capital has its principal offices at 601 Lexington Avenue, 54th Floor, New York, New York 10022.

The directors and executive officers of OrbiMed Advisors, OrbiMed Capital, and OrbiMed GP are set forth on Schedules I, II, and III, respectively, attached hereto. Schedules I, II and III set forth the following information with respect to each such person:

- (i) name;
- (ii) business address;
- (iii) present principal occupation of employment and the name, principal business and address of any corporation or other organization in which such employment is conducted; and
- (iv) citizenship.

(d) — (e) During the last five years, neither the Reporting Persons nor any Person named in Schedules I through III has been (i) convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) or (ii) 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.

Item 3. Source and Amount of Funds or Other Consideration

In September 2019, OrbiMed Advisors and OrbiMed GP, pursuant to their authority under the limited partnership agreement of OrbiMed Private Investments VII, LP (“OPI VII”), as more particularly referred to in Item 6 below, caused OPI VII to purchase 2,601,325 shares of Series B Preferred Stock of the Issuer. In connection with the IPO, shares of Series B Preferred Stock were subsequently converted (on the closing of the IPO) into Shares on a 1-for-1 basis.

On and prior to the close of June 19, 2020, OrbiMed Advisors and OrbiMed GP, pursuant to their authority under the limited partnership agreement of OPI VII, as more particularly referred to in Item 6 below, caused OPI VII to purchase 675,000 Shares in the IPO.

On and prior to the close of June 19, 2020, OrbiMed Capital, as the investment advisor to The Biotech Growth Trust PLC (“BIOG”), as more particularly referred to in Item 6 below, caused BIOG to purchase 50,800 Shares in the IPO.

On and prior to the close of June 19, 2020, OrbiMed Capital, as the investment advisor to OrbiMed Partners Master Fund Limited (“OPM”), as more particularly referred to in Item 6 below, caused OPM to purchase 99,200 Shares in the IPO.

The source of funds for such purchases was the working capital of OPI VII, OPM, and BIOG.

As a result of the transactions described in this Item 3, OrbiMed Advisors and OrbiMed GP may collectively be deemed to be the beneficial owners of approximately 8.9% of the outstanding Shares and OrbiMed Capital, as the investment advisor to BIOG and OPM, may be deemed to be the beneficial owner of 0.4% of the outstanding Shares. OrbiMed GP, as the general partner of OPI VII, may be deemed to be the beneficial owner of approximately 8.9% of the outstanding Shares. OrbiMed Advisors, as the managing member of OrbiMed GP, may be deemed to be the beneficial owner of approximately 8.9% of the outstanding Shares. None of the Reporting Persons have acquired or disposed of any additional Shares since June 23, 2020.

Item 4. Purpose of Transaction

This statement relates to the acquisition of Shares by the Reporting Persons. The Shares acquired by the Reporting Persons were acquired for the purpose of making an investment in the Issuer and not with the intention of acquiring control of the Issuer’s business on behalf of the Reporting Persons’ respective advisory clients.

The Reporting Persons from time to time intend to review their investment in the Issuer on the basis of various factors, including the Issuer’s business, financial condition, results of operations and prospects, general economic and industry conditions, the securities markets in general and those for the Issuer’s Shares in particular, as well as other developments and other investment opportunities. Based upon such review, the Reporting Persons will take such actions in the future as the Reporting Persons may deem appropriate in light of the circumstances existing from time to time. If the Reporting Persons believe that further investment in the Issuer is attractive, whether because of the market price of Shares or otherwise, they may acquire Shares or other securities of the Issuer either in the open market or in privately negotiated transactions. Similarly, depending on market and other factors, the Reporting Persons may determine to dispose of some or all of the Shares currently owned by the Reporting Persons or otherwise acquired by the Reporting Persons either in the open market or in privately negotiated transactions.

Except as set forth in this Schedule 13D, the Reporting Persons have not formulated any plans or proposals which relate to or would result in: (a) the acquisition by any person of additional securities of the Issuer or the disposition of securities of the Issuer, (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries, (c) a sale or transfer of a material amount of the assets of the Issuer or any of its subsidiaries, (d) any change in the present Board of Directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board, (e) any material change in the Issuer’s capitalization or dividend policy of the Issuer, (f) any other material change in the Issuer’s business or corporate structure, (g) any change in the Issuer’s charter or bylaws or other instrument corresponding thereto or other action which may impede the acquisition of control of the Issuer by any person, (h) causing a class of the Issuer’s securities to be deregistered or delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association, (i) a class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act or (j) any action similar to any of those enumerated above.

Item 5. Interest in Securities of the Issuer

(a) — (b) The following disclosure is based upon 36,668,085 outstanding Shares of the Issuer, as set forth in the Issuer's Rule 424(b)(4) Prospectus filed with the Securities and Exchange Commission on June 19, 2020 and giving effect to the additional 1,650,000 Shares sold by the Issuer to the underwriters pursuant to the underwriters' option (according to the Form 8-K as filed by the issuer with the Securities and Exchange Commission on June 23, 2020).

As of the date of this filing, OPI VII, a limited partnership organized under the laws of Delaware, holds 3,276,325 Shares constituting approximately 8.9% of the issued and outstanding Shares. OrbiMed GP is the general partner of OPI VII, pursuant to the terms of the limited partnership agreement of OPI VII, and OrbiMed Advisors is the managing member of OrbiMed GP, pursuant to the terms of the limited liability company agreement of OrbiMed GP. As a result, OrbiMed Advisors and OrbiMed GP share power to direct the vote and disposition of the Shares held by OPI VII and may be deemed directly or indirectly, including by reason of their mutual affiliation, to be the beneficial owners of the Shares held by OPI VII. OrbiMed Advisors exercises this investment and voting power through a management committee comprised of Carl L. Gordon, Sven H. Borho, and Jonathan T. Silverstein, each of whom disclaims beneficial ownership of the Shares held by OPI VII.

In addition, OrbiMed Advisors and OrbiMed GP, pursuant to their authority under the limited partnership agreement of OPI VII, caused OPI VII to enter into the agreements referred to in Item 6 below.

As of the date of this filing, BIOG, a publicly-listed investment trust organized under the laws of England, holds 50,800 Shares constituting approximately 0.1% of the issued and outstanding Shares. OrbiMed Capital is the investment advisor of BIOG. As a result, OrbiMed Capital has the power to direct the vote and disposition of the Shares held by BIOG and may be deemed directly or indirectly, including by reason of mutual affiliation, to be the beneficial owner of the Shares held by BIOG. OrbiMed Capital disclaims any beneficial ownership over the shares of the other Reporting Persons. OrbiMed Capital exercises this investment and voting power through a management committee comprised of Carl L. Gordon, Sven H. Borho, and Jonathan T. Silverstein, each of whom disclaims beneficial ownership of the Shares held by BIOG.

As of the date of this filing, OPM, an exempted company organized under the laws of Bermuda, holds 99,200 Shares constituting approximately 0.3% of the issued and outstanding Shares. OrbiMed Capital is the investment advisor of OPM. As a result, OrbiMed Capital has the power to direct the vote and disposition of the Shares held by OPM and may be deemed directly or indirectly, including by reason of mutual affiliation, to be the beneficial owner of the Shares held by OPM. OrbiMed Capital disclaims any beneficial ownership over the shares of the other Reporting Persons. OrbiMed Capital exercises this investment and voting power through a management committee comprised of Carl L. Gordon, Sven H. Borho, and Jonathan T. Silverstein, each of whom disclaims beneficial ownership of the Shares held by OPM.

(a) Except as disclosed in Item 3, the Reporting Persons have not effected any transactions during the past sixty (60) days in any Shares.

(b) Not applicable.

(c) Not applicable.

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

In addition to the relationships between the Reporting Persons described in Items 2 and 5 above, OrbiMed GP is the general partner of OPI VII, pursuant to the terms of the limited partnership agreement of OPI VII. Pursuant to this agreement and relationship, OrbiMed GP has discretionary investment management authority with respect to the assets of OPI VII. Such authority includes the power to vote and otherwise dispose of securities held by OPI VII. The number of outstanding Shares of the Issuer attributable to OPI VII is 3,276,325. OrbiMed GP, pursuant to its authority under the limited partnership agreement of OPI VII, may be considered to hold indirectly 3,276,325 Shares.

OrbiMed Advisors is the managing member of OrbiMed GP, pursuant to the terms of the limited liability company agreement of OrbiMed GP. Pursuant to these agreements and relationships, OrbiMed Advisors and OrbiMed GP have discretionary investment management authority with respect to the assets of OPI VII. Such authority includes the power of OrbiMed GP to vote and otherwise dispose of securities held by OPI VII. The number of outstanding Shares attributable to OPI VII is 3,276,325 Shares. OrbiMed Advisors, pursuant to its authority under the terms of the limited liability company agreement of OrbiMed GP, may also be considered to hold indirectly 3,276,325 Shares.

OrbiMed Capital is the investment advisor to OPM and BIOG. OrbiMed Capital may be deemed to have voting and investment power over the securities held by OPM and BIOG. Such authority includes the power of OrbiMed Capital to vote and otherwise dispose of securities held by OPM and BIOG. The number of outstanding Shares attributable to OPM is and to BIOG is 150,000 Shares. OrbiMed Capital, as the investment advisor to OPM and BIOG, may also be considered to hold indirectly 150,000 Shares.

David Bonita (“Bonita”), a member of OrbiMed Advisors, is a member of the Board of Directors of the Issuer and, accordingly, OrbiMed Advisors and OrbiMed GP may have the ability to affect and influence control of the Issuer. From time to time, Bonita may receive stock options or other awards of equity-based compensation pursuant to the Issuer’s compensation arrangements for non-employee directors. Pursuant to an agreement with OrbiMed Advisors and OrbiMed GP, Bonita is obligated to transfer any securities issued under any such stock options or other awards, or the economic benefit thereof, to OrbiMed Advisors and OrbiMed GP, which will in turn ensure that such securities or economic benefits are provided to OPI VII.

Registration Rights Agreement

In addition, OPI VII and certain other stockholders of the Issuer entered into an Amended and Restated Registration Rights Agreement with the Issuer (the “Registration Rights Agreement”), dated as of September 3, 2019. Pursuant to the Registration Rights Agreement and subject to the terms and conditions therein, the parties agreed that:

Demand Registration Rights

At any time beginning six months following the date of the completion of the IPO, the holders of at least a majority of the registrable securities then outstanding of the Issuer may make a written request that the Issuer register some or all of their registrable securities, subject to certain specified conditions and exceptions, including that the aggregated gross offering price of such offering must exceed \$50 million. The Issuer is required to use commercially reasonable efforts to effect the registration and will pay all registration expenses, other than underwriting discounts and commissions, related to any demand registration. The Issuer is not obligated to effect more than two of these registrations.

Piggyback Registration Rights

Whenever the Issuer proposes to file a registration statement under the Securities Act, including a registration statement on Form S-3 as discussed below, other than with respect to a demand registration or a registration statement on Forms S-4 or S-8, OPI VII will be entitled to notice of the registration and have the right, subject to limitations that the underwriters may impose on the number of Shares included in the registration, to include the Shares held by OPI VII in the registration.

Form S-3 Registration Rights

Pursuant to the Registration Rights Agreement, at any time after the Issuer is qualified to file a registration statement on Form S-3 under the Securities Act, and subject to limitations and conditions specified in the Registration Rights Agreement, any holder of the registrable securities then outstanding may make a written request that the Issuer prepare and file a registration statement on Form S-3 covering their Shares, so long as the aggregate price to the public equal or exceeds \$5,000,000. The Issuer is not obligated to effect more than two of these Form S-3 registrations in any 12-month period.

Lock-Up Agreement

In connection with the IPO, OPI VII and certain other stockholders entered into Lock-Up Agreements with the Issuer's underwriters. Pursuant to its Lock-Up Agreement, OPI VII agreed that it will not, during the period ending 180 days after the date of the IPO (the "Lock-Up Period"), directly or indirectly (1) sell, assign, transfer, pledge, contract to sell, or otherwise dispose of, any Shares or securities convertible into or exercisable or exchangeable for Shares with respect to which OPI VII has or acquires the power of disposition or (2) enter into any swap or other agreement that transfers, in whole or in part, the economic risk of ownership of any such Shares.

After the Lock-Up Period expires, the Reporting Persons' Shares will be eligible for sale in the public market, subject to any applicable limitations under Rule 144 under the Securities Act, and other applicable U.S. securities laws.

The foregoing description of the Registration Rights Agreement and the Lock-Up Agreement does not purport to be complete and are qualified in their entirety by reference to the full text of the Registration Rights Agreement and Lock-Up Agreement, which are filed as Exhibits 2 and 3 and incorporated herein by reference.

Item 7. Material to Be Filed as Exhibits

Exhibit	Description
1.	Joint Filing Agreement among OrbiMed Advisors LLC, OrbiMed Capital LLC, and OrbiMed Capital GP VII LLC.
2.	Amended and Restated Registration Rights Agreement by and among the Issuer and each of the persons listed on Schedules A and B thereto, dated as of September 3, 2019 (incorporated by reference to Exhibit 4.2 to the Issuer's Registration Statement on Form S-1 (SEC 333-238822), filed with the SEC on May 29, 2020).
3.	Form of Lock-Up Agreement filed as Exhibit A to Exhibit 1.1 to the Issuer's Registration Statement on Form S-1/A (SEC 333-238822), filed with the SEC on June 15, 2020).

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: June 26, 2020

ORBIMED ADVISORS LLC

By: /s/ Carl L. Gordon
Name: Carl L. Gordon
Title: Member

ORBIMED CAPITAL GP VII LLC

By: ORBIMED ADVISORS LLC, its managing member

By: /s/ Carl L. Gordon
Name: Carl L. Gordon
Title: Member of OrbiMed Advisors LLC

ORBIMED CAPITAL LLC

By: /s/ Carl L. Gordon
Name: Carl L. Gordon
Title: Member

SCHEDULE I

The names and present principal occupations of each of the executive officers and directors of OrbiMed Advisors LLC are set forth below. Unless otherwise noted, each of these persons is a United States citizen and has a business address of 601 Lexington Avenue, 54th Floor, New York, NY 10022.

<u>Name</u>	<u>Position with Reporting Person</u>	<u>Principal Occupation</u>
Carl L. Gordon	Member	Member OrbiMed Advisors LLC
Sven H. Borho German and Swedish Citizen	Member	Member OrbiMed Advisors LLC
Jonathan T. Silverstein	Member	Member OrbiMed Advisors LLC
W. Carter Neild	Member	Member OrbiMed Advisors LLC
Geoffrey C. Hsu	Member	Member OrbiMed Advisors LLC
C. Scotland Stevens	Member	Member OrbiMed Advisors LLC
David P. Bonita	Member	Member OrbiMed Advisors LLC
Trey Block	Chief Financial Officer	Chief Financial Officer OrbiMed Advisors LLC

SCHEDULE II

The names and present principal occupations of each of the executive officers and directors of OrbiMed Capital LLC are set forth below. Unless otherwise noted, each of these persons is a United States citizen and has a business address of 601 Lexington Avenue, 54th Floor, New York, NY 10022.

<u>Name</u>	<u>Position with Reporting Person</u>	<u>Principal Occupation</u>
Carl L. Gordon	Member	Member OrbiMed Capital LLC
Sven H. Borho German and Swedish Citizen	Member	Member OrbiMed Capital LLC
Jonathan T. Silverstein	Member	Member OrbiMed Capital LLC
W. Carter Neild	Member	Member OrbiMed Capital LLC
Geoffrey C. Hsu	Member	Member OrbiMed Capital LLC
C. Scotland Stevens	Member	Member OrbiMed Capital LLC
David P. Bonita	Member	Member OrbiMed Capital LLC
Trey Block	Chief Financial Officer	Chief Financial Officer OrbiMed Capital LLC

SCHEDULE III

The business and operations of OrbiMed Capital GP VII LLC are managed by the executive officers and directors of its managing member, OrbiMed Advisors LLC, set forth in Schedule I attached hereto.



EXHIBIT INDEX

Exhibit	Description
1.	Joint Filing Agreement among OrbiMed Advisors LLC, OrbiMed Capital LLC, and OrbiMed Capital GP VII LLC.
2.	Amended and Restated Registration Rights Agreement by and among the Issuer and each of the persons listed on Schedules A and B thereto, dated as of September 3, 2019 (incorporated by reference to Exhibit 4.2 to the Issuer's Registration Statement on Form S-1 (SEC 333-238822), filed with the SEC on May 29, 2020).
3.	Form of Lock-Up Agreement filed as Exhibit A to Exhibit 1.1 to the Issuer's Registration Statement on Form S-1/A (SEC 333-238822), filed with the SEC on June 15, 2020).

JOINT FILING AGREEMENT

The undersigned hereby agree that the Statement on Schedule 13D, dated June 26, 2020, with respect to the ordinary shares of Repare Therapeutics Inc. is filed on behalf of each of us pursuant to and in accordance with the provisions of Rule 13d-1(k) under the Securities Exchange Act of 1934, as amended. Each of the undersigned agrees to be responsible for the timely filing of this Statement, and for the completeness and accuracy of the information concerning itself contained therein. This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the 26th day of June 2020.

ORBIMED ADVISORS LLC

By: /s/ Carl L. Gordon
Name: Carl L. Gordon
Title: Member

ORBIMED CAPITAL GP VII LLC

By: ORBIMED ADVISORS LLC, its managing member

By: /s/ Carl L. Gordon
Name: Carl L. Gordon
Title: Member of OrbiMed Advisors LLC

ORBIMED CAPITAL LLC

By: /s/ Carl L. Gordon
Name: Carl L. Gordon
Title: Member
