

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

OMB APPROVAL	
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INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* <u>BVF PARTNERS L P/IL</u> <hr/> (Last) (First) (Middle) 44 MONTGOMERY STREET 40TH FL <hr/> (Street) SAN FRANCISCO CA 94104 <hr/> (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) 10/28/2021	3. Issuer Name and Ticker or Trading Symbol <u>Repare Therapeutics Inc. [RPTX]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) Other (specify below)	5. If Amendment, Date of Original Filed (Month/Day/Year) 6. Individual or Joint/Group Filing (Check Applicable Line) Form filed by One Reporting Person <input checked="" type="checkbox"/> Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
Common Stock ⁽¹⁾	2,548,764	D ⁽²⁾	
Common Stock ⁽¹⁾	1,903,361	D ⁽³⁾	
Common Stock ⁽¹⁾	299,728	D ⁽⁴⁾	

Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			

1. Name and Address of Reporting Person* <u>BVF PARTNERS L P/IL</u> <hr/> (Last) (First) (Middle) 44 MONTGOMERY STREET 40TH FL <hr/> (Street) SAN FRANCISCO CA 94104 <hr/> (City) (State) (Zip)
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1. Name and Address of Reporting Person* <u>BIOTECHNOLOGY VALUE FUND L P</u> <hr/> (Last) (First) (Middle) 44 MONTGOMERY STREET 40TH FL <hr/> (Street)

SAN CA 94104
FRANCISCO

(City) (State) (Zip)

1. Name and Address of Reporting Person*

BVF I GP LLC

(Last) (First) (Middle)

44 MONTGOMERY ST., 40TH FLOOR

(Street)

SAN CA 94104
FRANCISCO

(City) (State) (Zip)

1. Name and Address of Reporting Person*

BIOTECHNOLOGY VALUE FUND II LP

(Last) (First) (Middle)

44 MONTGOMERY STREET
40TH FL

(Street)

SAN CA 94104
FRANCISCO

(City) (State) (Zip)

1. Name and Address of Reporting Person*

BVF II GP LLC

(Last) (First) (Middle)

44 MONTGOMERY ST., 40TH FLOOR

(Street)

SAN CA 94104
FRANCISCO

(City) (State) (Zip)

1. Name and Address of Reporting Person*

Biotechnology Value Trading Fund OS LP

(Last) (First) (Middle)

P.O. BOX 309 UGLAND HOUSE

(Street)

GRAND E9 KY1-1104
CAYMAN

(City) (State) (Zip)

1. Name and Address of Reporting Person*

BVF Partners OS Ltd.

(Last) (First) (Middle)

P.O. BOX 309 UGLAND HOUSE

(Street)

GRAND E9 KY1-1104
CAYMAN

(City) (State) (Zip)

1. Name and Address of Reporting Person*

BVF GP HOLDINGS LLC

(Last) (First) (Middle)

44 MONTGOMERY ST., 40TH FLOOR

(Street)

SAN FRANCISCO CA 94104

(City) (State) (Zip)

1. Name and Address of Reporting Person*

BVF INC/IL

(Last) (First) (Middle)

44 MONTGOMERY STREET
40TH FL

(Street)

SAN FRANCISCO CA 94104

(City) (State) (Zip)

1. Name and Address of Reporting Person*

LAMPERT MARK N

(Last) (First) (Middle)

44 MONTGOMERY STREET
40TH FL

(Street)

SAN FRANCISCO CA 94104

(City) (State) (Zip)

Explanation of Responses:

1. This Form 3 is filed jointly by Biotechnology Value Fund, L.P. ("BVF"), Biotechnology Value Fund II, L.P. ("BVF2"), Biotechnology Value Trading Fund OS LP ("Trading Fund OS"), BVF Partners OS Ltd. ("Partners OS"), BVF I GP LLC ("BVF GP"), BVF II GP LLC ("BVF2 GP"), BVF GP Holdings LLC ("BVF GPH"), BVF Partners L.P. ("Partners"), BVF Inc. and Mark N. Lampert (collectively, the "Reporting Persons"). Each of the Reporting Persons is a member of a Section 13(d) group. Each of the Reporting Persons disclaims beneficial ownership of the securities reported herein except to the extent of his or its pecuniary interest therein.

2. Securities owned directly by BVF. As the general partner of BVF, BVF GP may be deemed to beneficially own the securities owned directly by BVF. As the sole member of BVF GP, BVF GPH may be deemed to beneficially own securities owned directly by BVF. As the investment manager of BVF, Partners may be deemed to beneficially own the securities owned directly by BVF. As the investment adviser and general partner of Partners, BVF Inc. may be deemed to beneficially own the securities owned directly by BVF. As a director and officer of BVF Inc., Mr. Lampert may be deemed to beneficially own the securities owned directly by BVF.

3. Securities owned directly by BVF2. As the general partner of BVF2, BVF2 GP may be deemed to beneficially own the securities owned directly by BVF2. As the sole member of BVF2 GP, BVF GPH may be deemed to beneficially own securities owned directly by BVF2. As the investment manager of BVF2, Partners may be deemed to beneficially own the securities owned directly by BVF2. As the investment adviser and general partner of Partners, BVF Inc. may be deemed to beneficially own the securities owned directly by BVF2. As a director and officer of BVF Inc., Mr. Lampert may be deemed to beneficially own the securities owned directly by BVF2.

4. Securities owned directly by Trading Fund OS. As the general partner of Trading Fund OS, Partners OS may be deemed to beneficially own the securities owned directly by Trading Fund OS. As the investment manager of Trading Fund OS and the sole member of Partners OS, Partners may be deemed to beneficially own the securities owned directly by Trading Fund OS. As the investment adviser and general partner of Partners, BVF Inc. may be deemed to beneficially own the securities owned directly by Trading Fund OS. As a director and officer of BVF Inc., Mr. Lampert may be deemed to beneficially own the securities owned directly by Trading Fund OS.

BVF Partners L.P., By:

BVF Inc., its general partner, By: /s/ Mark N.

11/08/2021

Lampert, President

Biotechnology Value Fund, L.P., By: BVF Partners L.P., its

11/08/2021

investment manager, By: BVF Inc., its general

partner, By: /s/ Mark N. Lampert, President
BVF I GP LLC, By: BVF GP HOLDINGS LLC, its sole member, By: /s/ Mark N. Lampert, Chief Executive Officer 11/08/2021

Biotechnology Value Fund II, L.P., By: BVF Partners L.P., its investment manager, By: BVF Inc., its general partner, By: /s/ Mark N. Lampert, President 11/08/2021

BVF II GP LLC, By: BVF GP HOLDINGS LLC, its sole member, By: /s/ Mark N. Lampert, Chief Executive Officer 11/08/2021

BVF Partners OS Ltd., By: BVF Partners L.P., its sole member, By: BVF Inc., its general partner, By: /s/ Mark N. Lampert, President 11/08/2021

Biotechnology Value Trading Fund OS LP, By: BVF Partners L.P., its investment manager, BVF Inc., its general partner, By: /s/ Mark N. Lampert, President 11/08/2021

BVF GP Holdings LLC, By: /s/ Mark N. Lampert, Chief Executive Officer 11/08/2021

BVF Inc., By: /s/ Mark N. Lampert, President 11/08/2021

/s/ Mark N. Lampert 11/08/2021

** Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 5 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.