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

# SCHEDULE 13G

(Rule 13d-102)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO RULES 13d-1(b), (c), AND (d) AND AMENDMENTS THERETO FILED PURSUANT TO RULE 13d-2(b)

(Amendment No. 3)<sup>1</sup>

Repare Therapeutics Inc.
(Name of Issuer)
Common Shares, no par value
(Title of Class of Securities)
760273102
(CUSIP Number)
December 31, 2021
(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 disclosures provided in 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, <i>see</i> the <i>Notes</i> ).

1	NAME OF REPORT	TING PERSON	
	Biotechnology	Value Fund, L.P.	
2		ROPRIATE BOX IF A MEMBER OF A GROUP	(a) ⊠ (b) □
3	SEC USE ONLY		
4	CITIZENSHIP OR I	PLACE OF ORGANIZATION	
	Delaware		
NUMBER OF SHARES BENEFICIALLY	5	SOLE VOTING POWER  0 shares	
OWNED BY EACH REPORTING	6	SHARED VOTING POWER  2,548,764	
PERSON WITH	7	SOLE DISPOSITIVE POWER  0 shares	
	8	SHARED DISPOSITIVE POWER  2,548,764	
9	AGGREGATE AMO	DUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	2,548,764		
10	CHECK BOX IF TH	HE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11	PERCENT OF CLA 6.1%	SS REPRESENTED BY AMOUNT IN ROW (9)	
12	TYPE OF REPORT	ING PERSON	
	PN		

1	NAME OF REPOR	TING PERSON	
	TARNE OF REPOR	IIIVO I EROOM	
	BVF I GP LL	C	
2	CHECK THE APPI	ROPRIATE BOX IF A MEMBER OF A GROUP	(a) ⊠
			(b) □
	CEC LICE ONLY		
3	SEC USE ONLY		
4	CITIZENSHIP OR	PLACE OF ORGANIZATION	-
	- 1		
NUMBER OF	Delaware 5	SOLE VOTING POWER	
SHARES	5	SOLE VOTING POWER	
BENEFICIALLY		0 shares	
OWNED BY	6	SHARED VOTING POWER	
EACH		2.7.0.70	
REPORTING PERSON WITH	7	2,548,764  SOLE DISPOSITIVE POWER	
PERSON WITH	/	SOLE DISPOSITIVE POWER	
		0 shares	
	8	SHARED DISPOSITIVE POWER	
		0.540.504	
9	ACCDECATE AM	2,548,764 OUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
9	AGGREGATE AW	OUNT DENEFICIALLY OWNED BY EACH REPORTING PERSON	
	2,548,764		
10	CHECK BOX IF T	HE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11	PERCENT OF CLA	ASS REPRESENTED BY AMOUNT IN ROW (9)	
11	I ERCEIVI OF CEP	100 KLI KLOLITLD DI AMOUNI IN KOW (3)	
	6.1%		
12	TYPE OF REPORT	TING PERSON	
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	00		

1	NAME OF REPORT	TINC DEDCON	
1	NAME OF REPORT	TING PERSON	
	Biotechnology	Value Fund II, L.P.	
2		OPRIATE BOX IF A MEMBER OF A GROUP	(a) ⊠
2	CHECK THE AFFIX	OFRIATE BOX IF A MEMBER OF A GROUP	(a) ⊠ (b) □
			(6) 🗆
3	SEC USE ONLY		
_			
4	CITIZENSHIP OR I	PLACE OF ORGANIZATION	
	Delaware		
NUMBER OF	5	SOLE VOTING POWER	
SHARES			
BENEFICIALLY		0 shares	
OWNED BY EACH	6	SHARED VOTING POWER	
REPORTING		1,903,361	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
TERSON WITH	/	SOLE DISPOSITIVE POWER	
		0 shares	
	8	SHARED DISPOSITIVE POWER	
		1,903,361	
9	AGGREGATE AMO	DUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	1,903,361		_
10	CHECK BOX IF TH	IE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11	DEDCENT OF CLA	CC DEDDECEMTED DV AMOUNT IN DOM (0)	
11	PERCENT OF CLA	SS REPRESENTED BY AMOUNT IN ROW (9)	
	4.6%		
12	TYPE OF REPORT	ING PERSON	
1-			
	PN		

1	NAME OF REPORT	TING DEDSON	
1	NAME OF REPORT	TING LEASON	
	BVF II GP LL	.C	
2	CHECK THE APPR	OPRIATE BOX IF A MEMBER OF A GROUP	(a) 🗵
			(b) □
3	SEC USE ONLY		
4	CITIZENSHID OR I	PLACE OF ORGANIZATION	
4	CITIZENSIIII OKI	EAGE OF ORGANIZATION	
	Delaware		
NUMBER OF	5	SOLE VOTING POWER	
SHARES			
BENEFICIALLY		0 shares	
OWNED BY EACH	6	SHARED VOTING POWER	
REPORTING		1,903,361	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
		0 shares	
	8	SHARED DISPOSITIVE POWER	
		1 002 261	
9	AGGREGATE AMO	1,903,361 DUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
J	TIGGILE OF THE THINK	SOME BENEFICIALES ON NEB BY ENGINEER GRAING PERCON	
	1,903,361		
10	CHECK BOX IF TH	HE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11	DEDCENT OF CLA	SS REPRESENTED BY AMOUNT IN ROW (9)	
11	FERCENT OF CLA	33 REFRESENTED DT AMOUNT IN ROW (9)	
	4.6%		
12	TYPE OF REPORT	ING PERSON	
	00		

Biotechnology Value Trading Fund OS LP  2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP  (a) (b) (c) (b) (c) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d		<del></del>		
2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP  3 SEC USE ONLY  4 CITIZENSHIP OR PLACE OF ORGANIZATION  Cayman Islands  NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH  7 SOLE DISPOSITIVE POWER  0 shares  8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON	1	NAME OF REPOR	TING PERSON	
2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP  3 SEC USE ONLY  4 CITIZENSHIP OR PLACE OF ORGANIZATION  Cayman Islands  NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH  7 SOLE DISPOSITIVE POWER  0 shares  8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON				
3 SEC USE ONLY  4 CITIZENSHIP OR PLACE OF ORGANIZATION Cayman Islands  NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH 7 SOLE DISPOSITIVE POWER  0 shares 8 SHARED DISPOSITIVE POWER  299,728 9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) Less than 1% 12 TYPE OF REPORTING PERSON				
3 SEC USE ONLY  4 CITIZENSHIP OR PLACE OF ORGANIZATION Cayman Islands  NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH  7 SOLE DISPOSITIVE POWER	2	CHECK THE APP	ROPRIATE BOX IF A MEMBER OF A GROUP	
4 CITIZENSHIP OR PLACE OF ORGANIZATION  Cayman Islands  NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH  7 SOLE DISPOSITIVE POWER  0 shares  8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON				(b) □
4 CITIZENSHIP OR PLACE OF ORGANIZATION  Cayman Islands  NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH  7 SOLE DISPOSITIVE POWER  0 shares  8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON				
Cayman Islands  NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH  7 SOLE DISPOSITIVE POWER  8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON	3	SEC USE ONLY		
Cayman Islands  NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH  7 SOLE DISPOSITIVE POWER  8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON				
Cayman Islands  NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH  7 SOLE DISPOSITIVE POWER  8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON				
Cayman Islands  NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH  7 SOLE DISPOSITIVE POWER  8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON	4	CITIZENSHIP OR	PLACE OF ORGANIZATION	
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NUMBER OF SHARES BENEFICIALLY OWNED BY 6 SHARED VOTING POWER EACH REPORTING PERSON WITH 7 SOLE DISPOSITIVE POWER  0 shares  8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON		Cavman Islar	nds	
SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH  7 SOLE DISPOSITIVE POWER  0 shares  8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON	NUMBER OF			
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OWNED BY EACH REPORTING PERSON WITH  7 SOLE DISPOSITIVE POWER  0 shares  8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON			0 shares	
EACH REPORTING PERSON WITH  7 SOLE DISPOSITIVE POWER  0 shares  8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON	_	6		
REPORTING PERSON WITH  7 SOLE DISPOSITIVE POWER  0 shares  8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON		U	SHARED VOTING FOWER	
PERSON WITH  7 SOLE DISPOSITIVE POWER  0 shares  8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON	_		200 720	
0 shares  8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON		7		
8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON	PERSON WITH	/	SOLE DISPOSITIVE POWER	
8 SHARED DISPOSITIVE POWER  299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON			O abavea	
299,728  9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON				
9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 299,728 10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1% 12 TYPE OF REPORTING PERSON		8	SHARED DISPOSITIVE POWER	
9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 299,728 10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1% 12 TYPE OF REPORTING PERSON				
299,728  10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON				
10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON	9	AGGREGATE AM	OUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON				
11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  Less than 1%  12 TYPE OF REPORTING PERSON				
Less than 1%  12 TYPE OF REPORTING PERSON	10	CHECK BOX IF T	HE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
Less than 1%  12 TYPE OF REPORTING PERSON				
Less than 1%  12 TYPE OF REPORTING PERSON				
12 TYPE OF REPORTING PERSON	11	PERCENT OF CLA	ASS REPRESENTED BY AMOUNT IN ROW (9)	
12 TYPE OF REPORTING PERSON				
		Less than 1%		
DNI	12	TYPE OF REPORT	TING PERSON	
DNI				
PN		PN		

	<del></del>		
1	NAME OF REPOR	TING PERSON	
	BVF Partners		
2	CHECK THE APPI	ROPRIATE BOX IF A MEMBER OF A GROUP	(a) ⊠
			(b) □
3	SEC USE ONLY		
4	CITIZENSHIP OR	PLACE OF ORGANIZATION	
	Cayman Islan	ds	
NUMBER OF	5	SOLE VOTING POWER	
SHARES			
BENEFICIALLY		0 shares	
OWNED BY	6	SHARED VOTING POWER	
EACH			
REPORTING		299,728	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
		0 shares	
	8	SHARED DISPOSITIVE POWER	
		299,728	
9	AGGREGATE AM	OUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	299,728		
10	CHECK BOX IF T	HE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11	PERCENT OF CLA	ASS REPRESENTED BY AMOUNT IN ROW (9)	
	Less than 1%		
12	TYPE OF REPORT	TING PERSON	
	CO		

1	NAME OF REPORT	TING PERSON	
1	White of Reform	ING I LIGOIV	
	BVF GP HOL	DINGS LLC	
2	CHECK THE APPR	OPRIATE BOX IF A MEMBER OF A GROUP	(a) 🗵
			(b) □
3	SEC USE ONLY		
4	CITIZENSHIP OR I	PLACE OF ORGANIZATION	-
	Delaware		
NUMBER OF	5	SOLE VOTING POWER	
SHARES BENEFICIALLY		0 shares	
OWNED BY	6	SHARED VOTING POWER	
EACH			
REPORTING		4,452,125	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
		0 shares	
	8	SHARED DISPOSITIVE POWER	
		4,452,125	
9	AGGREGATE AMO	DUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	4,452,125		
10		IE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
		``	
11	PERCENT OF CLA	SS REPRESENTED BY AMOUNT IN ROW (9)	
	10.7%		
12	TYPE OF REPORT	ING PERSON	
	00		

1	NAME OF REPOR	TING PERSON	
	BVF Partners	L.P.	
2	CHECK THE APPI	ROPRIATE BOX IF A MEMBER OF A GROUP	(a) ⊠ (b) □
3	SEC USE ONLY		
4	CITIZENSHIP OR	PLACE OF ORGANIZATION	
	Delaware		
NUMBER OF SHARES BENEFICIALLY	5	SOLE VOTING POWER  0 shares	
OWNED BY EACH REPORTING	6	SHARED VOTING POWER  4,858,761	
PERSON WITH	7	SOLE DISPOSITIVE POWER  0 shares	
	8	SHARED DISPOSITIVE POWER  4,858,761	
9	AGGREGATE AM 4,858,761	OUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
10		HE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11	PERCENT OF CLA	ASS REPRESENTED BY AMOUNT IN ROW (9)	
12	TYPE OF REPORT	TING PERSON	

1	NAME OF REPOR	TING PERSON	
	BVF Inc.		
2	CHECK THE APPI	ROPRIATE BOX IF A MEMBER OF A GROUP	(a) ⊠
			(b) □
3	SEC USE ONLY		
4	CITIZENSHIP OR	PLACE OF ORGANIZATION	
	Delaware		
NUMBER OF	5	SOLE VOTING POWER	
SHARES			
BENEFICIALLY		0 shares	
OWNED BY	6	SHARED VOTING POWER	
EACH			
REPORTING		4,858,761	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
		0 shares	
	8	SHARED DISPOSITIVE POWER	
		4,858,761	
9	AGGREGATE AM	OUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	4,858,761		
10	CHECK BOX IF TI	HE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11	PERCENT OF CLA	ASS REPRESENTED BY AMOUNT IN ROW (9)	
	11.6%		
12	TYPE OF REPORT	TING PERSON	
	CO		

1	NAME OF DEDON	TING DEDGON	
1	NAME OF REPORT	TING PERSON	
	36 137 7		
	Mark N. Lam		
2	CHECK THE APPR	ROPRIATE BOX IF A MEMBER OF A GROUP	(a) ⊠
			(b) □
3	SEC USE ONLY		
4	CITIZENSHIP OR	PLACE OF ORGANIZATION	
	United States		
NUMBER OF	5	SOLE VOTING POWER	
SHARES			
BENEFICIALLY		0 shares	
OWNED BY	6	SHARED VOTING POWER	
EACH			
REPORTING		4,858,761	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
		0 shares	
	8	SHARED DISPOSITIVE POWER	
		1000 501	
		4,858,761	
9	AGGREGATE AMO	OUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	4.050.764		
10	4,858,761	THE ACCORD ATTE AMOUNT IN DOME ON EVOLUTION OF THE OWN OF A DEC	
10	CHECK BOX IF TH	HE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
11	DED CENTE OF CLA	CC DEDDECEMBED DV AMOUNT IN DOM (0)	
11	PERCENT OF CLA	ASS REPRESENTED BY AMOUNT IN ROW (9)	
	11.6%		
12	TYPE OF REPORT	INC DEDCOM	
12	I I PE OF KEPORI	ING PERSON	
	IN		
	IIN		

Item 1(a). Name of Issuer:

Repare Therapeutics Inc., a Canada corporation (the "Issuer").

Item 1(b). Address of Issuer's Principal Executive Offices:

7210 Frederick-Banting, Suite 100 St-Laurent, Québec, Canada H4S 2A1

Item 2(a). Name of Person Filing

Item 2(b). Address of Principal Business Office or, if None, Residence

Item 2(c). Citizenship

Biotechnology Value Fund, L.P. ("BVF")

44 Montgomery St., 40th Floor San Francisco, California 94104

Citizenship: Delaware

BVF I GP LLC ("BVF GP")

44 Montgomery St., 40th Floor San Francisco, California 94104

Citizenship: Delaware

Biotechnology Value Fund II, L.P. ("BVF2")

44 Montgomery St., 40th Floor

San Francisco, California 94104

Citizenship: Delaware

BVF II GP LLC ("BVF2 GP")

44 Montgomery St., 40th Floor

San Francisco, California 94104

Citizenship: Delaware

Biotechnology Value Trading Fund OS LP ("Trading Fund OS")

PO Box 309 Ugland House

Grand Cayman, KY1-1104

Cayman Islands

Citizenship: Cayman Islands

BVF Partners OS Ltd. ("Partners OS")

PO Box 309 Ugland House

Grand Cayman, KY1-1104

Cayman Islands

Citizenship: Cayman Islands

BVF GP Holdings LLC ("BVF GPH")

44 Montgomery St., 40th Floor

San Francisco, California 94104

Citizenship: Delaware

BVF Partners L.P. ("Partners")

44 Montgomery St., 40th Floor

San Francisco, California 94104

Citizenship: Delaware

BVF Inc.

44 Montgomery St., 40th Floor

San Francisco, California 94104 Citizenship: Delaware

Mark N. Lampert ("Mr. Lampert") 44 Montgomery St., 40th Floor San Francisco, California 94104 Citizenship: United States

Each of the foregoing is referred to as a "Reporting Person" and collectively as the "Reporting Persons."

## Item 2(d). Title of Class of Securities:

Common Shares, no par value (the "Shares").

## Item 2(e). CUSIP Number:

760273102

Item 3. If This Statement is Filed Pursuant to Rule 13d-1(b), or 13d-2(b) or (c), Check Whether the Person Filing is a:

	/x/	Not applicable.
(a)	//	Broker or dealer registered under Section 15 of the Exchange Act.
(b)	//	Bank as defined in Section 3(a)(6) of the Exchange Act.
(c)	//	Insurance company as defined in Section 3(a)(19) of the Exchange Act.
(d)	//	Investment company registered under Section 8 of the Investment Company Act.
(e)	//	An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E).
(f)	//	An employee benefit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii)(F).
(g)	//	A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G).
(h)	//	A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act.
(i)	//	A church plan that is excluded from the definition of an investment company under Section $3(c)(14)$ of the Investment Company Act.
(j)	//	Group, in accordance with Rule 13d-1(b)(1)(ii)(J).
(k)	//	Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with Rule 240.13d-1(b)(1)(ii)(J), please specify the type of institution: $\_\_$

#### Item 4. Ownership

#### (a) Amount beneficially owned:

As of the close of business on December 31, 2021, (i) BVF beneficially owned 2,548,764 Shares, (ii) BVF2 beneficially owned 1,903,361 Shares and (iii) Trading Fund OS beneficially owned 299,728.

BVF GP, as the general partner of BVF, may be deemed to beneficially own the 2,548,764 Shares beneficially owned by BVF.

BVF2 GP, as the general partner of BVF2, may be deemed to beneficially own the 1,903,361 Shares beneficially owned by BVF2.

Partners OS, as the general partner of Trading Fund OS, may be deemed to beneficially own the 299,728 Shares beneficially owned by Trading Fund OS.

BVF GPH, as the sole member of each of BVF GP and BVF2 GP, may be deemed to beneficially own the 4,452,125 Shares beneficially owned in the aggregate by BVF and BVF2.

Partners, as the investment manager of BVF, BVF2 and Trading Fund OS, and the sole member of Partners OS, may be deemed to beneficially own the 4,858,761 Shares beneficially owned in the aggregate by BVF, BVF2 and Trading Fund OS and held in a certain Partners managed account (the "Partners Managed Account"), including 106,908 Shares held in the Partners Managed Account.

BVF Inc., as the general partner of Partners, may be deemed to beneficially own the 4,858,761 Shares beneficially owned by Partners.

Mr. Lampert, as a director and officer of BVF Inc., may be deemed to beneficially own the 4,858,761 Shares beneficially owned by BVF Inc.

The foregoing should not be construed in and of itself as an admission by any Reporting Person as to beneficial ownership of any Shares owned by another Reporting Person. BVF GP disclaims beneficial ownership of the Shares beneficially owned by BVF. BVF2 GP disclaims beneficial ownership of the Shares beneficially owned by Trading Fund OS. BVF GPH disclaims beneficial ownership of the Shares beneficially owned by BVF and BVF2. Each of Partners, BVF Inc. and Mr. Lampert disclaims beneficial ownership of the Shares beneficially owned by BVF, BVF2 and Trading Fund OS and held in the Partners Managed Account, and the filing of this statement shall not be construed as an admission that any such person or entity is the beneficial owner of any such securities.

#### (b) Percent of class:

The following percentages are based on 41,735,057 Shares outstanding as of November 10, 2021, as disclosed in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 10, 2021.

As of the close of business on December 31, 2021, (i) BVF beneficially owned approximately 6.1% of the outstanding Shares, (ii) BVF2 beneficially owned approximately 4.6% of the outstanding Shares, (iii) Trading Fund OS beneficially owned less than 1% of the outstanding Shares, (iv) BVF GP may be deemed to beneficially own approximately 6.1% of the outstanding Shares, (v) BVF2 GP may be deemed to beneficially own approximately 4.6% of the outstanding Shares, (vi) Partners OS may be deemed to beneficially own less than 1% of the outstanding Shares, (vii) BVF GPH may be deemed to beneficially own approximately 10.7% of the outstanding Shares, and (viii) each of Partners, BVF Inc. and Mr. Lampert may be deemed to beneficially own approximately 11.6% of the outstanding Shares (less than 1% of the outstanding Shares are held in the Partners Managed Account).

- (c) Number of shares as to which such person has:
- (i) Sole power to vote or to direct the vote

See Cover Pages Items 5-9.

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

See Cover Pages Items 5-9.

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

See Cover Pages Items 5-9.

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

See Cover Pages Items 5-9.

Item 5. Ownership of Five Percent or Less of a Class.

Not Applicable.

Item 6. Ownership of More than Five Percent on Behalf of Another Person.

BVF GP, BVF GPH, Partners, BVF Inc. and Mr. Lampert share voting and dispositive power over the Shares beneficially owned by BVF. BVF GPH, Partners, BVF Inc. and Mr. Lampert share voting and dispositive power over the Shares beneficially owned by BVF2. Partners, BVF Inc., and Mr. Lampert share voting and dispositive power over the Shares beneficially owned by Trading Fund OS and held in the Partners Managed Account.

Item 7. Identification and Classification of the Subsidiary That 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.

See Exhibit 99.1 to the Schedule 13G filed with the Securities and Exchange Commission on June 29, 2020.

Item 9. Notice of Dissolution of Group.

Not Applicable.

Item 10. Certifications.

By signing below each of the undersigned certifies that, to the best of its 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.

#### **SIGNATURE**

After reasonable inquiry and to the best of his knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

Dated: February 11, 2022 BIOTECHNOLOGY VALUE FUND, L.P. BIOTECHNOLOGY VALUE TRADING FUND OS LP By: BVF Partners L.P., its investment manager BVF I GP LLC., its general partner BVF Inc., its general partner By: /s/ Mark N. Lampert Mark N. Lampert /s/ Mark N. Lampert Chief Executive Officer Mark N. Lampert President **BVF I GP LLC BVF GP HOLDINGS LLC** /s/ Mark N. Lampert By: Mark N. Lampert /s/ Mark N. Lampert Chief Executive Officer Mark N. Lampert Chief Executive Officer BIOTECHNOLOGY VALUE FUND II, L.P. BVF PARTNERS L.P. BVF II GP LLC, its general partner By: BVF Inc., its general partner /s/ Mark N. Lampert By: Mark N. Lampert /s/ Mark N. Lampert Chief Executive Officer Mark N. Lampert President **BVF II GP LLC** BVF INC. By: /s/ Mark N. Lampert /s/ Mark N. Lampert Mark N. Lampert Chief Executive Officer Mark N. Lampert President BVF PARTNERS OS LTD.

BVF Partners L.P., its sole member BVF Inc., its general partner

By: /s/ Mark N. Lampert Mark N. Lampert

President

/s/ Mark N. Lampert

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MARK N. LAMPERT