

**UNITED STATES SECURITIES AND EXCHANGE  
COMMISSION**

Washington, D.C. 20549

**INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF  
SECURITIES**

**OMB APPROVAL**

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

<b>1. Name and Address of Reporting Person*</b> <u>GADICKE ANSBERT</u>  (Last) (First) (Middle) <u>C/O MPM CAPITAL</u> <u>450 KENDALL STREET</u>  (Street) <u>CAMBRIDGE MA 02142</u>  (City) (State) (Zip)	<b>2. Date of Event Requiring Statement (Month/Day/Year)</b> <u>06/18/2020</u>	<b>3. Issuer Name and Ticker or Trading Symbol</b> <u>Repare Therapeutics Inc. [ RPTX ]</u>	
		<b>4. Relationship of Reporting Person(s) to Issuer</b> (Check all applicable)  Director <input checked="" type="checkbox"/> 10% Owner  Officer (give title below) Other (specify below)	<b>5. If Amendment, Date of Original Filed (Month/Day/Year)</b>  <b>6. Individual or Joint/Group Filing (Check Applicable Line)</b> <input checked="" type="checkbox"/> Form filed by One Reporting Person <input 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)
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**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			
Class A Preferred Shares	(1)	(1)	Common Stock	3,603,161	0.00 <sup>(1)</sup>	I	See Footnote <sup>(2)(3)</sup>
Class B Preferred Shares	(1)	(1)	Common Stock	1,288,948	0.00 <sup>(1)</sup>	I	See Footnote <sup>(2)(4)</sup>

**Explanation of Responses:**

- All series of convertible preferred shares will convert into the number of shares of the Issuer's common stock on a 1-for-1 basis, for no additional consideration, immediately prior to the closing of the Issuer's initial public offering and have no expiration date.
- The Reporting Person disclaims beneficial ownership of the securities except to the extent of his pecuniary interest therein.
- The shares are held as follows: 1,636,136 by MPM BioVentures 2014, L.P. ("BV 2014"), 109,128 by MPM BioVentures 2014(B), L.P. ("BV 2014(B)"), 56,317 by MPM Asset Management Investors BV2014 LLC ("AM BV2014") and 1,801,580 by UBS Oncology Impact Fund L.P. ("UBS Oncology"). MPM BioVentures 2014 GP LLC and MPM BioVentures 2014 LLC ("BV LLC") are the direct and indirect general partners of BV 2014 and BV 2014(B). Ansbert Gadicke is a member of BV LLC. MPM Oncology Impact Management GP LLC ("Oncology GP LLC") is the General Partner of MPM Oncology Impact Management LP, the General Partner of Oncology Impact Fund (Cayman) Management L.P., the General Partner of UBS Oncology Impact Fund, L.P. Ansbert Gadicke is the managing director of Oncology GP LLC.
- The shares are held as follows: 864,749 by BV 2014, 57,677 by BV 2014(B), 29,765 by AM BV2014 and 336,757 by UBS Oncology.

**Remarks:**

/s/ Ansbert Gadicke,

06/18/2020

\*\* 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.**