UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2023

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission File Number: 001-39335

Repare Therapeutics Inc.

(Exact Name of Registrant as Specified in its Charter)

Québec	**Not applicable**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
7210 Frederick-Banting, Suite 100 St-Laurent, Québec, Canada **(Address of principal executive offices)**	**H4S 2A1** **(Zip Code)**

Registrant's telephone number, including area code: (857) 412-7018

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common shares, no par value	RPTX	The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of May 1, 2023, there were 42,088,446 of the registrant's common shares, no par value per share, outstanding.

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SPECIAL NOTE REGARDING FORWARD LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements about us and our industry that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this Quarterly Report on Form 10-Q, including statements regarding our strategy, future financial condition, future operations, research and development costs, plans and objectives of management, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "aim," "anticipate," "assume," "believe," "contemplate," "continue," "could," "design," "due," "estimate," "expect," "goal," "intend," "may," "objective," "plan," "predict," "positioned," "potential," "seek," "should," "target," "will," "would" and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology. Although we believe that we have a reasonable basis for each forward-looking statement contained in this Quarterly Report on Form 10-Q, we caution you that these statements are based on a combination of facts and factors currently known by us and our expectations of the future, about which we cannot be certain.

The forward-looking statements in this Quarterly Report on Form 10-Q include, among other things, statements about:

- the initiation, timing, progress and results of our current and future preclinical studies and clinical trials and related preparatory work and the period during which the results of the trials will become available, as well as our research and development programs;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our ability to obtain regulatory approval of RP-6306 and any of our other current and future product candidates that we develop;
- our ability to identify and develop additional product candidates using our SNIPRx platform;
- business disruptions affecting the initiation, patient enrollment, development and operation of our clinical trials, including a public health emergency or pandemic, such as the coronavirus disease, or COVID-19 pandemic;
- the evolving impact of macroeconomic events, including the COVID-19 pandemic, rising inflation, the U.S. Federal Reserve raising interest rates, recent disruptions in access to bank deposits or lending commitments due to bank failures and the Russia-Ukraine war, on our operations, supply chains, general economic conditions, our ability to raise additional capital, and the continuity of our business, including our preclinical studies and clinical trials;
- our ability to enroll patients in clinical trials, to timely and successfully complete those trials and to receive necessary regulatory approvals;
- the timing of completion of enrollment and availability of data from our current preclinical studies and clinical trials, including our Phase 1 clinical trials of RP-6306;
- the expected timing of filings with regulatory authorities for any product candidates that we develop;
- our expectations regarding the potential market size and the rate and degree of market acceptance for any current or future product candidates that we develop;
- our ability to receive any milestone or royalty payments under our collaboration and license agreements;
- the effects of competition with respect to RP-6306, camonsertib, or any of our other current or future product candidates, as well as innovations by current and future competitors in our industry;
- our ability to fund our working capital requirements;
- our intellectual property position, including the scope of protection we are able to establish, maintain and enforce for intellectual property rights covering our product candidates;
- our financial performance and our ability to effectively manage our anticipated growth;
- our ability to obtain additional funding for our operations; and
- other risks and uncertainties, including those listed under the section titled "Risk Factors" in this Quarterly Report and elsewhere in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the Securities and Exchange Commission (the "SEC") on February 28, 2023.

Although we believe that the expectations reflected in these forward-looking statements are reasonable, these statements relate to our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth, and involve known and unknown risks, uncertainties and other factors including, without limitation, risks, uncertainties and assumptions regarding the impact of the macroeconomic events, including the COVID-19 pandemic, on our business, operations, strategy, goals and anticipated timelines, our ongoing and planned preclinical activities, our ability to initiate, enroll, conduct or complete ongoing and planned clinical trials, our timelines for regulatory submissions and our financial position that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity,

performance or achievements expressed or implied by these forward-looking statements. You are urged to carefully review the disclosures we make concerning these risks and other factors that may affect our business and operating results in this Quarterly Report on Form 10-Q. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this document. Except as required by law, we do not intend, and undertake no obligation, to update any forward-looking information to reflect events or circumstances.

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

Repare Therapeutics Inc.
Condensed Consolidated Balance Sheets
(Unaudited)
(Amounts in thousands of U.S. dollars, except share data)

	As of March 31, 2023	As of December 31, 2022
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 121,461	$ 159,521
Marketable securities	192,663	184,420
Research and development tax credits receivable	1,659	1,280
Collaboration revenue receivable	3,996	1,525
Other receivables	1,358	1,518
Prepaid expenses	4,389	5,715
Total current assets	325,526	353,979
Property and equipment, net	5,396	4,228
Operating lease right-of-use assets	4,976	5,371
Other assets	408	497
TOTAL ASSETS	$ 336,306	$ 364,075
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 3,620	$ 461
Accrued expenses and other current liabilities	17,442	21,645
Operating lease liability, current portion	2,257	2,171
Deferred revenue, current portion	52,760	53,102
Income tax payable	4,856	1,240
Total current liabilities	80,935	78,619
Operating lease liability, net of current portion	2,780	3,257
Deferred revenue, net of current portion	1,347	2,682
TOTAL LIABILITIES	85,062	84,558
SHAREHOLDERS' EQUITY		
Preferred shares, no par value per share; unlimited shares authorized as of March 31, 2023 and December 31, 2022, respectively; 0 shares issued and outstanding as of March 31, 2023, and December 31, 2022, respectively	—	—
Common shares, no par value per share; unlimited shares authorized as of March 31, 2023 and December 31, 2022; 42,079,896 and 42,036,193 shares issued and outstanding as of March 31, 2023 and December 31, 2022, respectively	482,677	482,032
Additional paid-in capital	43,056	37,226
Accumulated other comprehensive loss	(235)	(428)
Accumulated deficit	(274,254)	(239,313)
Total shareholders' equity	251,244	279,517
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	$ 336,306	$ 364,075

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

Repare Therapeutics Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)
(Amounts in thousands of U.S. dollars, except share and per share data)

	Three Months Ended March 31,	
	2023	2022
Revenue:		
Collaboration agreements	$ 5,678	$ 408
Operating expenses:		
Research and development, net of tax credits	31,830	26,458
General and administrative	8,529	8,779
Total operating expenses	40,359	35,237
Loss from operations	(34,681)	(34,829)
Other income (expense), net		
Realized and unrealized loss on foreign exchange	(56)	(17)
Interest income	3,427	129
Other expense	(15)	(8)
Total other income, net	3,356	104
Loss before income taxes	(31,325)	(34,725)
Income tax expense	(3,616)	(32)
Net loss	$ (34,941)	$ (34,757)
Other comprehensive gain:		
Unrealized gain on available-for-sale marketable securities	$ 193	$ —
Total other comprehensive gain	193	—
Comprehensive loss	$ (34,748)	$ (34,757)
Net loss per share attributable to common shareholders - basic and diluted	$ (0.83)	$ (0.83)
Weighted-average common shares outstanding - basic and diluted	42,040,674	41,861,613

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

Repare Therapeutics Inc.
Condensed Consolidated Statements of Shareholders' Equity
(Unaudited)
(Amounts in thousands of U.S. dollars, except share data)

	Common Shares		Additional Paid-in	Accumulated Other Comprehensive	Accumulated	Total Shareholders'
	Shares	Amount	Capital	Loss	Deficit	Equity
Balance, December 31, 2021	41,850,162	$ 480,699	$ 17,988	$ —	$ (210,266)	$ 288,421
Exercise of stock options	12,235	46	(18)	—	—	28
Share-based compensation expense	—	—	4,755	—	—	4,755
Issuance of common shares under the 2020 Employee Share Purchase Plan	16,807	303	(90)	—	—	213
Net loss and comprehensive loss	—	—	—	—	(34,757)	(34,757)
Balance, March 31, 2022	41,879,204	$ 481,048	$ 22,635	$ —	$ (245,023)	$ 258,660
Balance, December 31, 2022	42,036,193	$ 482,032	$ 37,226	$ (428)	$ (239,313)	$ 279,517
Exercise of stock options	2,000	7	(3)	—	—	4
Share-based compensation expense	—	—	6,062	—	—	6,062
Issuance of common shares under the 2020 Employee Share Purchase Plan	41,703	638	(229)	—	—	409
Other comprehensive gain	—	—	—	193	—	193
Net loss	—	—	—	—	(34,941)	(34,941)
Balance, March 31, 2023	42,079,896	$ 482,677	$ 43,056	$ (235)	$ (274,254)	$ 251,244

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

Repare Therapeutics Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)
(Amounts in thousands of U.S. dollars)

	Three Months Ended March 31,	
	2023	**2022**
Cash Flows From Operating Activities:		
Net loss for the period	$ (34,941)	$ (34,757)
Adjustments to reconcile net loss to net cash used in operating activities:		
Share-based compensation expense	6,062	4,755
Depreciation expense	441	516
Non-cash lease expense	541	544
Foreign exchange (gain) loss	66	(40)
Net (accretion)/amortization of marketable securities	(1,839)	21
Deferred tax	—	(1,315)
Changes in operating assets and liabilities:		
Prepaid expenses	1,330	2,399
Research and development tax credits receivable	(379)	(399)
Collaboration revenue receivable	(2,528)	—
Other receivables	166	(5)
Other non-current assets	89	—
Accounts payable	2,016	(772)
Accrued expenses and other current liabilities	(4,203)	(1,487)
Operating lease liability, current portion	35	153
Income taxes payable	3,616	1,347
Operating lease liability, net of current portion	(581)	(558)
Deferred revenue	(1,677)	(408)
Net cash used in operating activities	(31,786)	(30,006)
Cash Flows From Investing Activities:		
Purchases of property and equipment	(475)	(487)
Proceeds from maturities of marketable securities	92,500	2,650
Purchase of marketable securities	(98,711)	(1,760)
Net cash (used in) provided by investing activities	(6,686)	403
Cash Flows From Financing Activities:		
Proceeds from exercise of stock options	4	28
Proceeds from issuance of common stock under the 2020 Employee Share Purchase Plan	409	213
Net cash provided by financing activities	413	241
Effect of exchange rate fluctuations on cash held	(1)	71
Net Decrease In Cash And Cash Equivalents	**(38,060)**	**(29,291)**
Cash and cash equivalents at beginning of period	159,521	334,427
Cash and cash equivalents at end of period	**$ 121,461**	**$ 305,136**
Supplemental Disclosure Of Cash Flow Information:		
Property and equipment purchases incurred but not yet paid	$ 1,134	$ 1,541
Right-of-use asset obtained in exchange for new operating lease liability	$ 146	$ 56

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

1. Organization and Nature of Business

Repare Therapeutics Inc. ("Repare" or the "Company") is a precision medicine oncology company focused on the development of synthetic lethality-based therapies for patients with cancer. The Company was incorporated under the *Canada Business Corporations Act* on September 6, 2016. On June 23, 2020, immediately prior to the completion of its initial public offering (the "IPO"), the Company was continued as a corporation under the *Business Corporations Act (Québec)*. The Company's common shares are listed on the Nasdaq Global Select Market under the ticker symbol "RPTX".

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in conformity with generally accepted accounting principles in the United States of America ("U.S. GAAP"). Any reference in these notes to applicable guidance is meant to refer to the authoritative U.S. GAAP as found in the Accounting Standards Codification ("ASC") and as amended by Accounting Standards Updates ("ASU") of the Financial Accounting Standards Board ("FASB").

The unaudited condensed consolidated financial statements have been prepared on the same basis as the audited annual consolidated financial statements as of and for the year ended December 31, 2022, and, in the opinion of management, reflect all adjustments, consisting of normal recurring adjustments, necessary for the fair presentation of the Company's consolidated financial position as of March 31, 2023, the consolidated results of its operations for the three months ended March 31, 2023 and 2022, its statements of shareholders' equity for the three months ended March 31, 2023 and 2022 and its consolidated cash flows for the three months ended March 31, 2023 and 2022.

These unaudited condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and the accompanying notes for the year ended December 31, 2022 included in the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission (the "SEC") on February 28, 2023 (the "Annual Report"). The condensed consolidated balance sheet data as of December 31, 2022 presented for comparative purposes was derived from the Company's audited consolidated financial statements but does not include all disclosures required by U.S. GAAP. The results for the three months ended March 31, 2023 are not necessarily indicative of the operating results to be expected for the full year or for any other subsequent interim period.

The Company's significant accounting policies are disclosed in the audited consolidated financial statements for the year ended December 31, 2022 included in the Annual Report. There have been no changes to the Company's significant accounting policies since the date of the audited consolidated financial statements for the year ended December 31, 2022 included in the Annual Report.

Principles of Consolidation

These unaudited condensed consolidated financial statements of the Company include the accounts of the Company and its wholly-owned subsidiary, Repare Therapeutics USA Inc. ("Repare USA"), which was incorporated under the laws of Delaware on June 1, 2017. The financial statements of Repare USA are prepared for the same reporting period as the parent company, using consistent accounting policies. All intra-group transactions, balances, income, and expenses are eliminated in full upon consolidation.

Smaller Reporting Company

The Company qualifies as a "smaller reporting company" under the Exchange Act as of March 31, 2023 because the market value of its common shares held by non-affiliates was less than $560 million as of June 30, 2022 and its revenue for the year ended December 31, 2021 was less than $100 million. As a smaller reporting company, the Company may rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. For so long as the Company remains a smaller reporting company, it is permitted and the Company intends to rely on such exemptions from certain disclosure and other requirements that are applicable to other public companies that are not smaller reporting companies.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in consolidated financial statements and accompanying notes. Significant estimates and

assumptions reflected in these unaudited condensed consolidated financial statements include, but are not limited to, estimates related to revenue recognition, accrued research and development expenses, share-based compensation, right-of-use assets and lease liabilities and income taxes. The Company bases its estimates on historical experience and other market specific or other relevant assumptions that it believes to be reasonable under the circumstances. Actual results could differ from those estimates. Changes in estimates are recorded in the period in which they become known.

3. Cash and Cash Equivalents and Marketable Securities

As of March 31, 2023 and December 31, 2022, cash and cash equivalents and marketable securities were comprised of the following:

	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
		(in thousands)		
As of March 31, 2023				
Cash and cash equivalents:				
Cash	$ 84,013	$ —	$ —	$ 84,013
Money market funds	33,362	—	—	33,362
Commercial paper	4,086	—	—	4,086
Total cash and cash equivalents:	$ 121,461	$ —	$ —	$ 121,461
Marketable securities:				
U.S. Treasury and government-sponsored enterprises	$ 131,393	$ 21	$ (192)	$ 131,222
Commercial paper	61,506	—	(65)	61,441
Total marketable securities	$ 192,899	$ 21	$ (257)	$ 192,663
As of December 31, 2022				
Cash and cash equivalents:				
Cash	$ 116,526	$ —	$ —	$ 116,526
Money market funds	42,995	—	—	42,995
Total cash and cash equivalents:	$ 159,521	$ —	$ —	$ 159,521
Marketable securities:				
U.S. Treasury and government-sponsored enterprises	$ 184,848	$ 5	$ (433)	$ 184,420
Total marketable securities	$ 184,848	$ 5	$ (433)	$ 184,420

Interest receivable was $0.2 million and $0.4 million as of March 31, 2023 and December 31, 2022, respectively, and is included in other receivables.

The Company held available-for-sale marketable securities with an aggregate fair value of $118.2 million and $157.9 million that were in an unrealized loss position as of March 31, 2023 and December 31, 2022, respectively. These marketable securities have been in an unrealized loss position for less than twelve months. The unrealized losses as of March 31, 2023 and December 31, 2022, were not attributed to credit risk but were primarily associated with changes in interest rates and market liquidity. The Company does not intend to sell these securities and it is more likely than not that it will hold these investments for a period of time sufficient to recover the amortized cost. As a result, the Company did not record an allowance for credit losses or other impairment charges for its marketable securities for the three months ended March 31, 2023 and 2022.

The Company recognized $0.2 million and nil in net unrealized gain in other comprehensive loss in the three months ended March 31, 2023 and 2022.

The maturities of the Company's marketable securities as of March 31, 2023 and December 31, 2022 are less than one year.

4. Fair Value Measurements

Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

- Level 1 – Quoted prices in active markets for identical assets or liabilities.
- Level 2 – Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.
- Level 3 – Unobservable inputs that are supported by little or no market activity that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

The following table presents information about the Company's financial assets measured at fair value on a recurring basis and indicates the level of the fair value hierarchy utilized to determine such fair values as of March 31, 2023 and December 31, 2022:

Description	Financial Assets	Level 1	Level 2	Level 3
		(in thousands)		
As of March 31, 2023				
Assets				
Investments included in cash and cash equivalents				
Money market funds	$ 33,362	$ 33,362	$ —	$ —
Commercial paper	4,086	—	4,086	—
Total investments included in cash and cash equivalents	37,448	33,362	4,086	—
Marketable securities				
U.S. Treasury and government-sponsored enterprises	131,222	—	131,222	—
Commercial paper	61,441	—	61,441	—
Total marketable securities	192,663	—	192,663	—
Total financial assets	$ 230,111	$ 33,362	$ 196,749	$ —
As of December 31, 2022				
Assets				
Money market funds included in cash and cash equivalents	$ 42,995	$ 42,995	$ —	$ —
Marketable securities				
U.S. Treasury and government-sponsored enterprises	184,420	—	184,420	—
Total financial assets	$ 227,415	$ 42,995	$ 184,420	$ —

When developing fair value estimates, the Company maximizes the use of observable inputs and minimizes the use of unobservable inputs. When available, the Company uses quoted market prices to measure the fair value. In determining the fair values at each date presented above, the Company relied on quoted prices for similar securities in active markets or using other inputs that are observable or can be corroborated by observable market data.

During the three months ended March 31, 2023, there were no transfers between fair value measure levels.

5. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities as of March 31, 2023 and December 31, 2022 consisted of the following:

	March 31, 2023	December 31, 2022
	(in thousands)	
Accrued compensation and benefits	$ 2,149	$ 5,616
Accrued research and development expense	14,410	15,078
Accrued professional services	724	680
Other	159	271
Total accrued expenses and other current liabilities	$ 17,442	$ 21,645

6. Collaboration and License Agreements

(a) Roche Collaboration and License Agreement

In June 2022, the Company entered into a collaboration and license agreement (the "Roche Agreement") with Hoffmann-La Roche Inc. and F. Hoffmann-La Roche Ltd (collectively, "Roche") regarding the development and commercialization of the Company's product candidate camonsertib (also known as RP-3500) and specified other Ataxia-Telangiectasia and Rad3-related protein kinase ("ATR") inhibitors (the "Licensed Products"). The transaction was subject to clearance under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 and other customary closing conditions, which were met on July 13, 2022 (the "Effective Date"). Pursuant to the Roche Agreement, the Company granted Roche a worldwide, perpetual, exclusive, sublicensable license to develop, manufacture, and commercialize the Licensed Products, as well as a non-exclusive, sublicensable license to certain related companion diagnostics. The Company has agreed to complete specified ongoing clinical trials in accordance with the development plan in the Roche Agreement, as well as ongoing investigator sponsored trials (together, the "Continuing Trials") at the Company's expense. Roche assumes all subsequent development of camonsertib with the potential to expand development into additional tumors and multiple combination studies. The Company retained the right to conduct specified clinical trials (the "Repare Trials") of camonsertib in combination with the Company's PKMYT1 compound (also known as RP-6306). The Roche Agreement also provides the Company, at its sole discretion, with the ability to opt-in to a 50/50 U.S. co-development and profit share arrangement, including participation in U.S. co-promotion if U.S. regulatory approval is received. If the Company chooses to exercise its co-development and profit share option, it will continue to be eligible to receive certain clinical, regulatory, commercial and sales milestone payments, in addition to full ex-U.S. royalties.

The Roche Agreement was subsequently amended in October 2022 to extend the timeline to negotiate in good faith the parties' rights and obligations with respect to the Repare Trials, as defined in the Roche Agreement, and to clarify indications included in the development plan that are subject to milestones.

Under the terms of the Roche Agreement, the Company received an upfront, nonrefundable payment of $125.0 million in July 2022. The Company also received an additional payment of $4.0 million negotiated with Roche for revisions to the clinical development plan under the Roche Agreement as agreed to by the parties at the time of the Effective Date. The Company further received $5.6 million for the transfer of clinical trial material on hand to Roche, as agreed to pursuant to the Roche Agreement. In addition, in February 2023, the Company became entitled to receive an additional payment of $4.0 million, negotiated with Roche for additional revisions to the clinical development plan under the Roche Agreement, which was received in April 2023. The Company is eligible to receive up to $1.172 billion in potential clinical, regulatory, commercial and sales milestones, as well as royalties on global net sales ranging from high-single-digits to high-teens, subject to certain specified reductions. Royalties are payable by Roche on a product by product and country by country basis until the later of 12 years following the first commercial sale of a licensed product in such country or the expiration of certain exclusivity rights.

The Roche Agreement will expire upon the last to expire royalty term or, as applicable, the end of the U.S. co-development and profit share arrangement. Additionally, Roche may terminate the agreement for convenience in its entirety or on a product by product or country by country basis subject to certain notice periods. Either party may terminate earlier upon the other party's uncured material breach of the agreement or insolvency. Subject to the terms of the Roche Agreement, effective upon termination of the Roche Agreement, the Company is entitled to retain specified licenses to be able to continue to exploit the Licensed Products.

The Company assessed the Roche Agreement in accordance with ASC 606, Revenue from Contracts with Customers, and concluded that Roche is a customer within the context of the agreement. At inception, the Company identified several performance obligations under the agreement, being (i) the combination of the exclusive perpetual license to the Licensed Products and the non-exclusive license to certain companion diagnostics, (ii) the research and development activities related to the completion of the Continuing Trials, as well as (iii) the transfer of clinical trial materials on hand. The Company determined that the exclusive license to the Licensed Products and the non-exclusive license to certain companion diagnostics should be combined into one distinct performance obligation as they were not capable of being distinct from each other within the context of the agreement given both are highly interdependent of each other. The Company determined that the combined licenses, the completion of the Continuing Trials and the

transfer of clinical trial materials were all capable of being distinct and were distinct within the context of the Roche Agreement given such activities are independent of each other and Roche could benefit from either separately.

The Company determined that the transaction price at the onset of the agreement was $134.6 million, being the total non-refundable upfront payment received of $125.0 million, the additional $4.0 million payment received and the $5.6 million received for the transfer of clinical trial materials. Additional consideration is to be paid to the Company upon the achievement of multiple clinical, regulatory and sales milestones. The Company utilized the most likely method approach and concluded that these amounts were constrained based on the probability of achievement. As such, the Company excluded this additional consideration from the transaction price.

The Company allocated the transaction price at the onset of the agreement of $134.6 million to each performance obligation based on the relative stand-alone selling price of each performance obligation at inception. The Company determined the estimated stand-alone selling price at contract inception of the combined licenses by applying a probability adjusted discounted cashflow model which forecasts future cash flows related to the licenses. The Company considered applicable market conditions and relevant entity-specific factors, including those factors contemplated in negotiating the agreement, probability of success, discount rate and the time needed to commercialize a product pursuant to the license. The Company determined the estimated stand-alone selling price at contract inception of the research and development activities required to complete the Continuing Trials based on internal estimates of the costs to perform the services, inclusive of a reasonable profit margin. Significant inputs used to determine the total costs to complete the Continuing Trials included the length of time required, the internal hours as well as external costs expected to be incurred, the number of patients and the number of clinical and investigator sponsored trials. The Company determined the stand-alone selling price of the clinical trial materials transferred based on the purchase price from external vendors, without applying a markup as the materials have a built-in margin from the external vendors.

In February 2023, the Company received a further payment of $4.0 million negotiated with Roche for additional revisions to the clinical development plan. The Company determined that the scope and the price of the contract had increased as a result of these additional changes and thus reflected a contract modification under ASC 606. The additional services were assessed to be not distinct from the ongoing performance obligation related to the completion of the Continuing Trials but distinct from the other performance obligations. No adjustment was therefore made to the two previously completed performance obligations, being the combined licenses and the transfer of clinical trial materials. The transaction price was updated for the additional consideration of $4.0 million, which has been allocated to the completion of the Continuing Trials performance obligation. An adjustment to revenue previously recognized based on updated measures of progress related to the completion of the Continuing Trials has been recognized on a cumulative catch-up basis in the first quarter of 2023.

Based on the relative stand-alone selling price, the allocation of the transaction price to the separate performance obligations is as follows:

Performance obligation	**Transaction price**
	(in thousands)
Combined licenses	$ 105,327
Completion of Continuing Trials	30,585
Transfer of clinical trial materials	2,714
Total transaction price	$ 138,626

Revenue associated with the combined licenses was recognized at a point in time upon the transfer of the licenses to Roche on the Effective Date of the Roche Agreement as the Company concluded that the combined licenses were a functional intellectual property license that Roche could benefit from as of the time of grant. Revenue associated with the transfer of clinical trial materials was recognized at a point in time upon delivery of the clinical trial materials to Roche in the year ended December 31, 2022. Revenue associated with the completion of the Continuing Trials has been deferred and will be recognized on a proportional performance basis over the period of time to complete the Continuing Trials, being estimated at within 24 months of the Effective Date, using input-based measurements of total costs of research and development incurred to estimate the proportion performed. Progress towards completion is remeasured at the end of each reporting period.

The Company recognized $5.3 million and nil for the three months ended March 31, 2023 and 2022, respectively as revenue associated with the Roche Agreement in relation to the partial recognition of deferred revenue for research and development services performed towards the completion of the Continuing Trials during the period.

As of March 31, 2023, there was $16.7 million (December 31, 2022 -$18.0 million) of deferred revenue related to the Roche Agreement, of which $15.4 million (December 31, 2022 - $15.3 million) was classified as current and $1.3 million (December 31, 2022

- $2.7 million) was classified as non-current in the condensed consolidated balance sheet based on the period the services to complete the Continuing Trials are expected to be performed.

(b) Bristol-Myers Squibb Collaboration and License Agreement

In May 2020, the Company entered into a collaboration and license agreement (the "BMS Agreement") with Bristol-Myers Squibb Company (“Bristol Myers Squibb”), pursuant to which the Company and Bristol Myers Squibb have agreed to collaborate in the research and development of potential new product candidates for the treatment of cancer. The Company is providing Bristol Myers Squibb access to a selected number of its existing screening campaigns and novel campaigns. The Company is responsible for carrying out early-stage research activities directed to identifying potential targets for potential licensing by Bristol Myers Squibb, in accordance with a mutually agreed upon research plan, and will be solely responsible for such costs. The collaboration consists of programs directed to both druggable targets and to targets commonly considered undruggable to traditional small molecule approaches. Upon Bristol Myers Squibb’s election to exercise its option to obtain exclusive worldwide licenses for the subsequent development, manufacturing and commercialization of a program, Bristol Myers Squibb will then be solely responsible for all such worldwide activities and costs.

The collaboration term will expire 42 months after the effective date of the BMS Agreement. The BMS Agreement will expire, assuming that Bristol Myers Squibb has exercised at least one option for a program, on a licensed product-by-licensed product and country-by-country basis on expiration of the applicable royalty term and in its entirety upon expiration of the last royalty term. Either party may terminate earlier upon an uncured material breach of the agreement by the other party, or the insolvency of the other party. Additionally, Bristol Myers Squibb may terminate the BMS Agreement for any or no reason on a program-by-program basis upon specified written notice.

Under the terms of the BMS Agreement, Bristol Myers Squibb paid the Company an initial nonrefundable upfront fee of $50.0 million in June 2020. The Company is also entitled to receive up to $301.0 million in total milestones on a program-by-program basis, consisting of $176.0 million in the aggregate for certain specified research, development and regulatory milestones and $125.0 million in the aggregate for certain specified commercial milestones. The Company is further entitled to a tiered percentage royalty on annual net sales ranging from high-single digits to low-double digits, subject to certain specified reductions.

The Company assessed the BMS Agreement in accordance with ASC 606, Revenue from Contracts with Customers, and concluded that Bristol Myers Squibb is a customer based on the agreement structure. At inception, the Company identified several performance obligations under the BMS Agreement, being (i) research activities for each campaign over the collaboration term, as well as (ii) a selected number of material rights associated with options to obtain exclusive development, manufacturing, and commercial licenses to targets identified. The Company determined that the options to obtain the exclusive development, manufacturing and commercialization licenses were material rights under ASC 606 because there are minimal amounts to be paid to the Company upon exercise of such options.

The Company determined that the transaction price at the onset of the BMS Agreement is the total non-refundable upfront payment received of $50.0 million. Additional consideration is to be paid to the Company upon the exercise of options to license targets and future milestone payments. The Company utilized the most likely method approach and concluded that these amounts were constrained as they represent option fees and milestone payments that can only be achieved subsequent to option exercises. As such, the Company excluded this additional consideration from the transaction price.

The Company has allocated the transaction price of $50.0 million to each performance obligation based on the relative stand-alone selling price of each performance obligation at inception, which was determined based on each performance obligation's estimated stand-alone selling price. The Company has determined the estimated stand-alone selling price at contract inception of the research activities based on internal estimates of the costs to perform the services, inclusive of a reasonable profit margin. Significant inputs used to determine the total costs to perform the research activities included the length of time required, the internal hours expected to be incurred on the services and the number and costs of various studies that will be performed to complete the research plan. The Company determined the estimated stand-alone selling price at contract inception of the material rights associated with options to obtain exclusive licenses to druggable targets and undruggable targets based on the fees Bristol Myers Squibb would pay to exercise these options, the probability-weighted value of expected future cash flows associated with each license related to each target and the probability that these options would be exercised by Bristol Myers Squibb. In developing such estimates, the Company also considered applicable market conditions and relevant entity-specific factors, including those factors contemplated in negotiating the agreement, probability of success and the time needed to commercialize a product candidate pursuant to the associated license. Based on the relative stand-alone selling price, the allocation of the transaction price to the separate performance obligations was as follows:

Performance obligation	Transaction price (in thousands)
Research activities	$ 6,405
Options to license druggable targets	31,148
Options to license undruggable targets	12,447
Total transaction price	$ 50,000

Revenue associated with the options has been deferred and will be recognized at the point in time when options to license are exercised by Bristol Myers Squibb or upon expiry of such options. Revenue associated with the research activities has been deferred and will be recognized on a proportional performance basis over the period of service for research activities, being the collaboration term, using input-based measurements of total costs of research incurred to estimated proportion performed. Progress towards completion is remeasured at the end of each reporting period.

The Company recognized $0.4 million for the three months ended March 31, 2023 and 2022 as revenue associated with the BMS Agreement in relation to the partial recognition of deferred revenue for research activities performed.

As of March 31, 2023, there was $27.0 million (December 31, 2022 - $27.4 million) of deferred revenue related to the BMS Agreement, which was classified as current in the condensed consolidated balance sheet based on the period the services are expected to be performed and the expected timing of potential option exercises.

7. Leases

The Company has historically entered into lease arrangements for its facilities. As of March 31, 2023, the Company had four operating leases with required future minimum payments. The Company's leases generally do not include termination or purchase options.

In January 2023, and as further amended in April 2023, the Company entered into a lease renewal agreement for office and laboratory space located in Montréal, Québec, for a thirty-two month term, ending in August 2025.

Operating Leases

The following tables contain a summary of the lease costs recognized under ASC 842 and other information pertaining to the Company's operating leases for the three months ended March 31, 2023 and 2022:

	Three Months Ended March 31,	
	2023	2022
	(in thousands)	
Operating Leases		
Lease Costs		
Operating lease costs	$ 592	$ 615
Short-term lease costs	14	8
Variable lease costs	40	67
Total lease costs	$ 646	$ 690

	Three Months Ended March 31,	
	2023	2022
	(in thousands, except as specified otherwise)	
Other Operating Lease Information		
Operating cash flows used for operating leases	$ 599	$ 475
Right-of-use assets obtained in exchange for new operating lease liability	$ 146	$ 56
Weighted-average remaining lease term (in years)	2.19	3.16
Weighted-average discount rate	4.1%	4.0%

8. Share-Based Compensation

2020 Employee Share Purchase Plan

In June 2020, the Company's board of directors adopted, and the Company's shareholders approved the 2020 Employee Share Purchase Plan (the "ESPP"). The maximum number of common shares that may be issued under the ESPP was initially 327,000. Additionally, the number of shares reserved and available for issuance under the ESPP automatically increases each January 1, beginning on January 1, 2021 and each January 1 thereafter through January 31, 2030, by the lesser of (1) 1.0% of the total number of common shares outstanding on December 31 of the preceding calendar year, (2) 3,300,000 common shares, or (3) such smaller number of common shares as the Company's board of directors may designate. As of March 31, 2023, the total number of common shares that may be issued under the ESPP is 1,445,331.

The ESPP enables eligible employees to purchase common shares of the Company at the end of each offering period at a price equal to 85% of the fair market value of the shares on the first business day or the last business day of the offering period, whichever is lower. Participation in the ESPP is voluntary. Eligible employees become participants in the ESPP by enrolling in the plan and authorizing payroll deductions. At the end of each offering period, accumulated payroll deductions are used to purchase the Company's shares at the discounted price. The Company makes no contributions to the ESPP. A participant may withdraw from the ESPP or suspend contributions to the ESPP. If the participant elects to withdraw during an offering, all contributions are refunded as soon as administratively practicable. If a participant elects to withdraw or suspend contributions, they will not be able to re-enroll in the current offering but may elect to participate in future offerings. The ESPP purchases only whole shares of the Company's shares. ESPP offering periods occur on a rolling six-month basis.

The Company issued 41,703 common shares under the ESPP during the three months ended March 31, 2023 at a weighted-average price per share of $9.80. Cash received from purchases under the ESPP for the three months ended March 31, 2023 was $0.4 million.

Option Plan and 2020 Plan

In December 2016, as further amended in December 2017 and September 2019, the Company adopted the Repare Therapeutics Inc. Option Plan (the "Option Plan") for the issuance of share options and other share-based awards to directors, officers, employees or consultants. The Option Plan authorized up to 4,074,135 shares of the Company's common shares to be issued.

In June 2020, the Company's board of directors adopted, and the Company's shareholders approved the 2020 Equity Incentive Plan (the "2020 Plan"). The 2020 Plan became effective on the effective date of the IPO, at which time the Company ceased granting awards under the Option Plan. The 2020 Plan allows the Company's compensation committee to grant equity-based and cash-based incentive awards to the Company's officers, employees, directors and consultants including but not limited to stock options and restricted share units. A total of 3,600,000 common shares were initially reserved for issuance under the 2020 Plan, plus the number of shares (not to exceed 3,807,448 shares) consisting of (i) 298,605 common shares that were available for the issuance of awards under the Option Plan at the time the 2020 Plan became effective, which ceased to be available for future issuance under the Option Plan at such time and (ii) any shares subject to outstanding options or other share awards that were granted under the Option Plan that terminate or expire prior to exercise or settlement; are forfeited because of the failure to vest; or are reacquired or withheld (or not issued) to satisfy a tax withholding obligation or the purchase or exercise price. In addition, the number of shares reserved and available for issuance under the 2020 Plan will automatically increase each January 1, beginning on January 1, 2021 and each January 1 thereafter through January 1, 2030, by 5% of the outstanding number of common shares on the immediately preceding December 31, or such lesser number of shares as determined by the Company's board of directors. As of March 31, 2023, the total number of common shares reserved for issuance under the 2020 Plan is 10,026,479.

Stock Options

Total outstanding stock options as of March 31, 2023 was as follows:

	2023	
	Number of shares	Weighted average exercise price
Outstanding at beginning of period	8,032,902	$ 14.38
Granted	1,569,640	$ 12.30
Exercised	(2,000)	$ 2.24
Cancelled or forfeited	(27,713)	$ 18.92
Outstanding at end of period	9,572,829	$ 14.03

During the three months ended March 31, 2023, an aggregate of 2,000 options were exercised at a weighted-average exercise price of $2.24 per share, for aggregate proceeds of nil. As a result, an amount of nil previously included in additional paid-in capital related to the exercised options has been credited to common shares and deducted from additional paid-in capital.

The fair value of stock options, and the assumptions used in the Black Scholes option-pricing model to determine the grant date fair value of stock options granted to employees and non-employees were as follows, presented on a weighted average basis:

	Three Months Ended March 31,	
	2023	2022
Fair value of stock options	$ 8.85	$ 10.17
Risk-free interest rate	3.65%	1.73%
Expected terms (in years)	6.08	6.08
Expected volatility	81.77%	78.47%
Expected dividend yield	0.00%	0.00%

Restricted Share Units

Total outstanding restricted share units as of March 31, 2023 was as follows:

	2023	
	Number of shares	Weighted average grant date fair value
Outstanding at beginning of period	—	
Awarded	626,260	$ 12.42
Forfeited	(3,425)	$ 12.42
Outstanding at end of period	622,835	$ 12.42

The fair value of each restricted share unit is estimated on the date of grant based on the fair value of our common shares on that same date.

Share-Based Compensation

Share-based compensation expense was allocated as follows:

	Three Months Ended March 31,	
	2023	2022
	(in thousands)	
Research and development	$ 3,219	$ 2,311
General and administrative	2,843	2,444
Total share-based compensation expense	$ 6,062	$ 4,755

Share-based compensation expense by type of award was as follows:

	Three Months Ended March 31,	
	2023	2022
	(in thousands)	
Stock options	$ 5,537	$ 4,712
Restricted share units	425	—
ESPP	100	43
Total share-based compensation expense	$ 6,062	$ 4,755

As of March 31, 2023, there was $51.0 million and $7.3 million of unrecognized share-based compensation expense to be recognized over a weighted average period of 2.0 years and 2.8 years related to unvested stock options and unvested restricted share units, respectively.

9. Net Loss per Share

The following table summarizes the computation of basic and diluted net loss per share attributable to common shareholders of the Company:

	Three Months Ended March 31,	
	2023	2022
	(in thousands, except share and per share amounts)	
Numerator:		
Net loss	$ (34,941)	$ (34,757)
Denominator:		
Weighted-average common shares outstanding — basic and diluted	42,040,674	41,861,613
Net loss per share — basic and diluted	$ (0.83)	$ (0.83)

The Company excluded the following potential common shares, presented based on amounts outstanding at each period end, from the computation of diluted net loss per share attributable to common shareholders for the periods indicated because including them would have had an anti-dilutive effect:

	Three Months Ended March 31,	
	2023	2022
Options to purchase common shares	9,572,829	7,474,870
Restricted share units	622,835	—
Estimated shares issuable under the ESPP	5,755	1,682

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

You should read the following discussion and analysis of our financial condition and results of operations together with (i) our unaudited condensed consolidated financial statements and related notes, appearing elsewhere in this Quarterly Report on Form 10-Q and (ii) the audited consolidated financial statements and related notes and management's discussion and analysis of financial condition and results of operations for the fiscal year ended December 31, 2022 included in our Annual Report on Form 10-K, or the Annual Report, filed with the Securities and Exchange Commission, or the SEC, on February 28, 2023. Some of the information contained in this discussion and analysis or set forth elsewhere in this Quarterly Report on Form 10-Q, including information with respect to our plans and strategy for our business and related financing, contains forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the "Risk Factors" sections of this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the year ended December 31, 2022, our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a leading clinical-stage precision oncology company enabled by our proprietary synthetic lethality approach to the discovery and development of novel therapeutics. Synthetic lethality, or SL, represents a clinically validated approach to drug development. We use our proprietary, genome-wide, CRISPR-enabled SNIPRx platform to systematically discover and develop highly targeted cancer therapies focused on genomic instability, including DNA damage repair. SL arises when a deficiency in either of two genes is tolerated in cells, but simultaneous deficiencies in both genes cause cell death. Cancer cells that contain a mutation in one gene of a SL pair are susceptible to therapeutic intervention targeting the other gene pair. Using our SNIPRx platform, we are developing our pipeline of SL product candidates, including our initial product candidate, camonsertib (also known as RP-3500 or RG6526), a potent and selective oral small molecule inhibitor of ATR (Ataxia-Telangiectasia and Rad3-related protein kinase) for the treatment of solid tumors with specific DNA damage repair-related genomic alterations, including those in the ATM gene (ataxia telangiectasia mutated kinase) as part of a network of 16 STEP^2-identified genomic alterations. In July 2020, we began dosing patients in our Phase 1/2 TRESR (Treatment Enabled by SNIPRx) clinical trial of camonsertib in advanced solid tumors and, in August 2021, we began dosing patients in our Phase 1b/2 ATTACC clinical trial of camonsertib to evaluate the safety and efficacy of camonsertib in combination with approved poly (ADP-ribose) polymerase, or PARP, inhibitors, olaparib and niraparib, in patients with molecularly selected cancers. In April 2022, we presented comprehensive Phase 1 monotherapy clinical data from the TRESR Phase 1/2 trial. In June 2022, we entered into a worldwide license and collaboration agreement with Hoffmann-La Roche Inc. and F. Hoffmann-La Roche Ltd, collectively referred to as Roche, for the development and commercialization of camonsertib. In April 2023, we presented initial clinical data on camonsertib in combination with the three PARP inhibitors from the ongoing Phase 1/2 TRESR and Phase 1b/2 ATTACC clinical trials in a plenary oral presentation at the 2023 AACR Annual Meeting.

In April 2021, we initiated our Phase 1 MYTHIC clinical trial for RP-6306, our PKMYT1 (Protein Kinase Membrane-associated tyrosine- and threonine-specific cdc-2 inhibitory kinase) SL inhibitor, as a monotherapy for the treatment of molecularly selected advanced solid tumors, and anticipate early Phase 1 read-outs of the monotherapy data in June 2023. We initiated Phase 1 combination studies of RP-6306 with gemcitabine (MAGNETIC) in December 2021, camonsertib (MYTHIC) in May 2022, and FOLFIRI (MINOTAUR) in August 2022, each for the treatment of molecularly selected advanced solid tumors, and anticipate providing an update on some of these combination studies in the fourth quarter of 2023. In the fourth quarter of 2022, we received fast track designation for RP-6306 in combination with gemcitabine for the treatment of adult patients with CCNE1-amplified, or FBXW7, or PPP2R1A mutated platinum resistant ovarian cancer. Based on promising preclinical data released at the 34th EORTC-NCI-AACR Symposium in October 2022, we are working with clinical investigators to initiate clinical testing, as part of an investigator-sponsored trial (IST), of a fourth RP-6306 combination with carboplatin, with first patient dosing expected this year. In the fourth quarter of 2022, we entered into an agreement with Canadian Cancer Trials Group, or CCTG, for a planned, basket Phase 2 IST to evaluate RP-6306 in patients with selected, advanced cancers receiving standard agents. We plan to modify the trial to include a sub-study, which will evaluate RP-6306 in combination with gemcitabine in patients with CD4/6i-resistant ER+/HER2- metastatic breast cancer.

We continue to focus on the advancement of our preclinical programs into clinical development. We initiated IND-enabling studies in the first half of 2023 for a small molecule, now designated RP-1664, against an undisclosed target with potential to enter the clinic in late 2023 or early 2024. We are also pursuing development of an inhibitor of polymerase theta, or Polθ, in collaboration with Ono, as Polθ is SL with multiple gene deficiencies found in tumors, including BRCA alterations. In 2022, we selected a proposed inhibitor, which we designated as RP-2119. In February 2023, based on our review of ongoing preclinical studies, we elected to prioritize other Polθ inhibiting compounds in our preclinical development portfolio, which we believe have a higher probability for clinical impact relative to RP-2119. We expect to enter the clinic with a Polθ inhibitor in 2024.

Since our inception in September 2016, we have focused primarily on raising capital, organizing and staffing our company, conducting discovery and research activities, identifying potential SL gene pairs, establishing and protecting our intellectual property portfolio including for our proprietary SNIPRx platform, developing and progressing our product candidates through preclinical studies

and preparing for clinical trials and establishing arrangements with third parties for the manufacture of initial quantities of our product candidates and component materials. On June 23, 2020, we completed our initial public offering, or IPO, whereby we issued an aggregate of 12,650,000 common shares, which includes the exercise in full of the underwriters' option to purchase up to an additional 1,650,000 common shares, at a public offering price of $20.00 per share. The aggregate net proceeds received by us from the IPO were approximately $232.0 million, after deducting underwriting commissions and offering expenses of $3.2 million. On November 1, 2021, we completed a follow-on offering, or the 2021 Offering, whereby we issued 4,600,000 common shares, including the exercise in full by the underwriters of their option to purchase up to 600,000 additional common shares, at a public offering price of $22.00 per share, for net proceeds of $94.3 million, after deducting underwriting commissions as well as offering expenses of $0.8 million. Prior to our IPO, we had funded our operations primarily through equity financings, having raised an aggregate of approximately $135.2 million of gross proceeds from the sale of our preferred shares and $15.0 million of gross proceeds from the issuance of a warrant to acquire our common shares. As of March 31, 2023, we had cash and cash equivalents and marketable securities on hand of $314.1 million.

Since inception, we have incurred significant operating losses. Our net losses were $29.0 million and $106.9 million for the years ended December 31, 2022 and 2021, respectively, and $34.9 million for the three months ended March 31, 2023. As of March 31, 2023, we had an accumulated deficit of $274.3 million. We expect to continue to incur significant and increasing expenses and operating losses for the foreseeable future, as we advance our product candidates, including RP-6306, through preclinical and clinical development and seek regulatory approvals, manufacture drug product and drug supply, maintain and expand our intellectual property portfolio. Our net losses are also expected to be impacted as we hire additional personnel, pay for accounting, audit, legal, regulatory and consulting services, and pay costs associated with maintaining compliance with Nasdaq listing rules and the SEC requirements, directors and officers, or D&O, insurance, investor and public relations activities and other expenses associated with operating as a public company. Our net losses may fluctuate significantly from quarter-to-quarter and year-to-year, depending on the timing of our preclinical studies, our clinical trials, our expenditures on other research and development activities, and our revenue and expenses recognized from collaboration and license agreements.

We do not have any products approved for sale. We will not generate revenue from product sales unless and until we successfully complete clinical development and obtain regulatory approval for our product candidates, if ever. In addition, if we obtain regulatory approval for our product candidates and do not enter into a third-party commercialization partnership, we expect to incur significant expenses related to developing our commercialization capability to support product sales, marketing, manufacturing and distribution activities. As a result, we will need substantial additional funding to support our continuing operations and pursue our growth strategy. Until we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of public or private equity offerings and debt financings or other sources, such as potential collaboration agreements, strategic alliances and licensing arrangements. We may be unable to raise additional funds or enter into such other agreements or arrangements when needed on acceptable terms, or at all. Our failure to raise capital or enter into such agreements as, and when, needed, could have a negative effect on our business, results of operations and financial condition.

Macroeconomic Considerations

Unfavorable conditions in the economy in the United States, Canada and abroad may negatively affect the growth of our business and our results of operations. For example, macroeconomic events, including the COVID-19 pandemic, rising inflation, the U.S. Federal Reserve raising interest rates, recent disruptions in access to bank deposits or lending commitments due to bank failures and the Russia-Ukraine war, have led to economic uncertainty globally. The effect of macroeconomic conditions may not be fully reflected in our results of operations until future periods. If, however, economic uncertainty increases or the global economy worsens, our business, financial condition and results of operations may be harmed. For further discussion of the potential impacts of macroeconomic events on our business, financial condition, and operating results, see the section titled "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2022.

Recent Developments

- **Announced initial clinical data from the Phase 1/2 TRESR and ATTACC trials evaluating camonsertib (RP-3500/RG6526, partnered with Roche), a potent and selective oral small molecule inhibitor of ATR, in combination with PARP inhibitors in a Clinical Trials Plenary Session at the 2023 AACR Annual Meeting.**
    - Camonsertib combinations appear to be well tolerated. Dose limiting toxicity in 68 patients treated with the proposed combination doses were related to myelotoxicity (Grade 3+ anemia 3%, thrombocytopenia 6%, neutropenia 7%, and febrile neutropenia 3%). No prophylactic growth factors were required when administering the PARP inhibitors at evaluated doses.
    - Camonsertib combination resulted in durable clinical benefit across tumor types and genomic alterations, regardless of choice of PARP inhibitor and presence of platinum resistance. Overall clinical benefit rate, or CBR, for all patients

was 48%. Patients with platinum-resistant tumors had an overall response rate, or ORR, of 12% and CBR of 49% and benefited similarly to non-platinum-resistant tumors (ORR 13%, CBR 46%).

- Compelling results were observed particularly in patients with advanced ovarian cancer (n = 19). In these patients, overall response was 32%, CBR was 58% and median progression-free survival was approximately seven months with treatment greater than 16 weeks and ongoing in nine patients.
- Early circulating tumor DNA molecular responses in 66% (31/47) of evaluable patients confirm antitumor activity of low dose, intermittent PARP inhibitor + ATR inhibitor therapy. The molecular response rate (MRR) was significantly higher in patients with clinical benefit (83%) compared to those without (48%; p=0.015) and significantly higher than camonsertib monotherapy that was also administered at higher doses (43% or 27/63; p=0.02). Molecular responses were also observed in patients with prior PARP inhibitor exposure (57%) and platinum resistance (64%).
- We are conducting dose optimization and efficacy assessments in tumor specific expansions in the ATTACC study in collaboration with Roche to support future clinical development plans for camonsertib combinations with PARP inhibitors.

- **Evaluating RP-6306, a first-in-class, oral PKMYT1 inhibitor as a monotherapy and in combinations in multiple early clinical studies.**
  - We presented two poster presentations for RP-6306 at the 2023 AACR Annual Meeting regarding the co-mutation landscape in CCNE1 amplifications and the tumor heterogeneity of copy number in ovarian and uterine cancers. Additionally, several collaborators presented preclinical findings on the potential benefits of combining a Wee1 inhibitor with RP-6306 and the effect of RP-6306 in triple negative breast cancer.
  - We expect to report initial Phase 1 monotherapy clinical data for RP-6306 for the treatment of molecularly selected advanced solid tumors (MYTHIC) in June 2023. We expect to report initial Phase 1 combination therapy clinical data for RP-6306 for the treatment of molecularly selected advanced solid tumors in the fourth quarter of the year.
  - We are working with clinical investigators to initiate clinical testing, as part of an investigator-sponsored trial (IST), of a fourth RP-6306 combination with carboplatin, with first patient dosing expected this year.
  - We are collaborating with the CCTG for a basket Phase 2 IST to evaluate RP-6306 in patients with selected, advanced cancers receiving standard agents that is expected to begin this year. A sub-study under the master clinical trial protocol will evaluate RP-6306 in combination with gemcitabine in patients with CD4/6i-resistant ER+/HER2- metastatic breast cancer.
- **Advancing preclinical programs into clinical development.**
  - We initiated IND-enabling studies in the first half of this year for a small molecule, now designated RP-1664, against an undisclosed target with potential to enter the clinic in late 2023 or early 2024.
  - We are also pursuing development of an inhibitor of Polθ that is expected to enter the clinic in 2024.
- **In April 2023, we announced the appointment of Susan Molineaux, Ph.D., to our Board of Directors, effective as of the date of our upcoming annual meeting of shareholders in June 2023. Concurrent with Dr. Molineaux's appointment as of the date of the annual meeting, Jerel Davis, Ph.D., Managing Director at Versant Ventures and a founding member of Repare's Board of Directors, will step down from the Board. Additionally, we have expanded the senior leadership team with the appointment of Daniel Belanger as EVP Human Resources in May 2023.**

Components of Results of Operations

Revenue

To date, we have not recognized any revenue from product sales, and we do not expect to generate any revenue from the sale of products in the foreseeable future. If our development efforts for our product candidates are successful and result in regulatory approval, or license agreements with third parties, we may generate revenue in the future from product sales. However, there can be no assurance as to when we will generate such revenue, if at all.

Collaboration and License Agreement with Hoffmann-La Roche Inc. and F. Hoffmann-La Roche Ltd

On June 1, 2022, we entered into a collaboration and license agreement, or the Roche Agreement, with Roche regarding the development and commercialization of our product candidate camonsertib (also known as RP-3500 or RG6526) and specified other

ATR inhibitors, which we refer to as the Licensed Products. The transaction was subject to clearance under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 and other customary closing conditions, which were met on July 13, 2022.

Under the Roche Agreement, we granted Roche a worldwide, perpetual, exclusive, sublicensable license to develop, manufacture, and commercialize the Licensed Products. Roche assumes all subsequent development of camonsertib with the potential to expand development into additional tumors and multiple combination studies. We have agreed to complete specified ongoing clinical trials in accordance with the development plan in the Roche Agreement, as well as ongoing investigator sponsored trials, or together, the Continuing Trials, at our expense. We also retained the right to conduct specified clinical trials of camonsertib in combination with our PKMYT1 compound (also known as RP-6306).

The Roche Agreement was subsequently amended in October 2022 to extend the timeline to negotiate in good faith the parties' rights and obligations with respect to the Repare Trials, as defined in the Roche Agreement, and to clarify indications included in the development plan that are subject to milestones.

Under the terms of the Roche Agreement, we received an upfront payment of $125 million in July 2022, and are eligible to receive up to $1.172 billion in potential clinical, regulatory, commercial and sales milestones, including up to $55 million in potential near-term payments, and royalties on global net sales ranging from high-single-digits to high-teens. The Roche Agreement also provides us with the ability to opt-in to a 50/50 U.S. co-development and profit share arrangement, including participation in U.S. co-promotion if U.S. regulatory approval is received. If we choose to exercise its co-development and profit share option, we will continue to be eligible to receive certain clinical, regulatory, commercial and sales milestone payments, in addition to full ex-U.S. royalties.

We determined that the transaction price at the onset of the Roche Agreement was $134.6 million, being (i) the total non-refundable upfront payment received of $125.0 million, (ii) the additional $4.0 million payment received, negotiated with Roche for revisions to the clinical development plan under the Roche Agreement as agreed at the time of the effective date of the Roche Agreement, and (iii) the $5.6 million received for the transfer of clinical trial materials.

In February 2023, the Company received a further payment of $4.0 million negotiated with Roche for additional revisions to the clinical development plan. The Company determined that the scope and the price of the contract had increased as a result of these additional changes and thus reflected a contract modification under ASC 606. The additional services were assessed to be not distinct from the ongoing performance obligation related to the completion of the Continuing Trials but distinct from the other performance obligations. No adjustment was therefore made to the two previously completed performance obligations, being the combined licenses and the transfer of clinical trial materials. The transaction price was updated for the additional consideration of $4.0 million, which has been allocated to the completion of the Continuing Trials performance obligation. An adjustment to revenue previously recognized based on updated measures of progress related to the completion of the Continuing Trials has been recognized on a cumulative catch-up basis in the first quarter of 2023.

Performance obligation	**Transaction price (in thousands)**
Combined licenses	$ 105,327
Completion of Continuing Trials	30,585
Transfer of clinical trial materials	2,714
Total transaction price	$ 138,626

We recognized $5.3 million and nil for the three months ended March 31, 2023 and 2022, respectively as revenue associated with the Roche Agreement in relation to the partial recognition of deferred revenue for research and development services performed towards the completion of the Continuing Trials during the period.

As of March 31, 2023, there was $16.7 million (December 31, 2022 - $18.0 million) of deferred revenue related to the Roche Agreement, of which $15.4 million (December 31, 2022 - $15.3 million) was classified as current and $1.3 million (December 31, 2022 - $2.7 million) was classified as non-current in the condensed consolidated balance sheet based on the period the services to complete the Continuing Trials are expected to be performed.

Collaboration and License Agreement with Bristol-Myers Squibb Company

In May 2020, we entered into a collaboration and license agreement, or the BMS Agreement, with the Bristol Myers Squibb Company, or Bristol Myers Squibb, pursuant to which we and Bristol Myers Squibb have agreed to collaborate in the research and development of potential new product candidates for the treatment of cancer. We are providing Bristol Myers Squibb access to a selected number of our existing screening campaigns and novel campaigns. We are responsible for carrying out early-stage research activities directed to identifying potential targets for potential licensing by Bristol Myers Squibb. The collaboration consists of programs directed

to both druggable targets and to targets commonly considered undruggable to traditional small molecule approaches. In the event that Bristol Myers Squibb elects to obtain an exclusive license for the subsequent development, manufacturing and commercialization of a program, Bristol Myers Squibb will then be solely responsible for all such worldwide activities.

The BMS Agreement was subsequently amended in July, September and November 2020 to include additional campaigns to the list of existing campaigns from which Bristol Myers Squibb may select campaigns under the BMS Agreement and to enable unblinding of a Bristol Myers Squibb alliance manager in order to streamline the collaboration process.

As part of the BMS Agreement, Bristol Myers Squibb paid us an initial upfront fee of $50.0 million and made an equity investment of $15.0 million in our company. We will also be eligible to receive up to $3.0 billion in total milestones across all potential programs. Such milestones consist of $301.0 million in total milestones per program subject upon the achievement of certain specified research, development, regulatory and commercial milestones.

The $50.0 million upfront payment was recorded as deferred revenue on our consolidated balance sheet and is expected to be partially recognized at the point in time when option licenses are exercised by Bristol Myers Squibb, with the remainder being recognized on a proportional performance basis over the period of service for research services.

Performance obligation	**Transaction price (in thousands)**
Research activities	$ 6,405
Options to license druggable targets	31,148
Options to license undruggable targets	12,447
Total transaction price	$ 50,000

We recognized $0.4 million for the three months ended March 31, 2023 and 2022 as revenue associated with the BMS Agreement in relation to the partial recognition of deferred revenue for research activities performed.

As of March 31, 2023, there was $27.0 million (December 31, 2022 - $27.4 million) of deferred revenue related to the BMS Agreement, which was classified as current in the condensed consolidated balance sheet based on the period the services are expected to be performed and the expected timing of potential option exercises.

Collaboration Agreement with Ono Pharmaceutical Company Ltd.

In January 2019, we entered into a research services, license and collaboration agreement, or the Ono Agreement, with Ono Pharmaceutical Company Ltd., or Ono, pursuant to which we and Ono have agreed to collaborate in the research of potential product candidates targeting Polθ and the development of our small molecule Polθ inhibitor program. Pursuant to the terms of the agreement, we received initial upfront payments of approximately $8.1 million. These upfront payments have been recorded as deferred revenue on our consolidated balance sheet as per our revenue recognition accounting policy and will be recognized as revenue at the point in time when a product candidate is licensed to Ono pursuant to the terms of the agreement.

In October 2021, we and Ono entered into an amendment to the Ono Agreement whereby the research term, as defined in the Ono Agreement, was extended by one year. In January 2023, we and Ono entered into a second amendment to the Ono Agreement whereby the Research Term, as defined in the Ono Agreement, was extended until July 31, 2023.

In October 2021 and December 2022, we achieved specified research triggers amounting to ¥100 million ($0.9 million) and ¥200 million ($1.5 million), respectively, as research service payments provided for in the Ono Agreement. The ¥200 million ($1.5 million) is included in the collaboration revenue receivable at December 31, 2022 and was subsequently received in January 2023. These amounts have been added to the transaction price as the consideration was no longer constrained.

As of March 31, 2023 and December 31, 2022 we classified $10.5 million as current deferred revenue related to the Ono Agreement.

Operating Expenses

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for our research activities, including our drug discovery efforts and the development of our product candidates, partially offset by fully refundable Canadian research and development tax credits. We expense research and development costs as incurred, which include:

- external research and development expenses incurred under agreements with contract research organizations, or CROs, as well as investigative sites and consultants that conduct our clinical trials, preclinical studies and other scientific development services;
- employee-related expenses, including salaries, bonuses, benefits, share-based compensation, and other related costs for those employees involved in research and development efforts;
- costs related to manufacturing material for our preclinical studies and clinical trials, including fees paid to contract manufacturing organizations, or CMOs;
- laboratory supplies and research materials;
- upfront, milestone and maintenance fees incurred under license, acquisition and other third-party agreements;
- costs related to compliance with regulatory requirements; and
- facilities, depreciation, scientific advisory board and other allocated expenses, which include direct and allocated expenses for rent, maintenance of facilities and equipment, insurance, equipment and software.

Costs for certain activities are recognized based on an evaluation of the progress to completion of specific tasks using data such as information provided to us by our vendors and analyzing the progress of our studies or other services performed. Significant judgment and estimates are made in determining the accrued expense or prepaid balances at the end of any reporting period.

We characterize research and development costs incurred prior to the identification of a product candidate as discovery costs. We characterize costs incurred once a product candidate has been identified as development costs.

Our direct external research and development expenses consist primarily of fees paid to outside consultants, CROs, CMOs and research laboratories in connection with our preclinical development, process development, manufacturing and clinical development activities. Our direct external research and development expenses also include fees incurred under license, acquisition, and option agreements. We track these external research and development costs on a program-by-program basis once we have identified a product candidate.

We do not allocate employee costs, costs associated with our discovery efforts, laboratory supplies, and facilities, including depreciation or other indirect costs, to specific programs because these costs are deployed across multiple programs and, as such, are not separately classified. We use internal resources primarily to conduct our research and discovery activities as well as for managing our preclinical development, process development, manufacturing, and clinical development activities.

The following table summarizes our research and development costs:

	Three Months Ended March 31,	
	2023	2022
	(in thousands)	
Discovery costs		
Direct external costs*	$ 1,611	$ 2,331
Laboratory supplies and research materials	906	1,159
Personnel related costs*	3,122	2,981
Facilities related costs	364	390
Other costs*	911	988
	6,914	7,849
Development		
Direct external costs		
Camonsertib program*	6,035	5,578
RP-6306 program*	6,079	5,767
RP-1664 program	1,298	—
Polθ program	1,751	—
Personnel related costs*	9,084	6,510
Facilities related costs	202	223
Other costs*	846	930
	25,295	19,008
R&D tax credits	(379)	(399)
Total research and development costs	$ 31,830	$ 26,458

*Certain amounts have been reclassified for presentation purposes.

The successful development of our product candidates is highly uncertain. We plan to substantially increase our research and development expenses for the foreseeable future as we continue the development of our product candidates and manufacturing processes and conduct discovery and research activities for our preclinical programs. We cannot determine with certainty the timing of initiation, the duration, or the completion costs of current or future preclinical studies and clinical trials of our product candidates due to the inherently unpredictable nature of preclinical and clinical development. Clinical and preclinical development timelines, the probability of success and development costs can differ materially from expectations. We anticipate that we will make determinations as to which product candidates to pursue and how much funding to direct to each product candidate on an ongoing basis in response to the results of ongoing and future preclinical studies and clinical trials, regulatory developments, and our ongoing assessments as to each product candidate's commercial potential. We will need to raise substantial additional capital in the future. Our clinical development costs are expected to increase significantly as we commence clinical trials. We anticipate that our expenses will increase substantially, particularly due to the numerous risks and uncertainties associated with developing product candidates, including the uncertainty of:

- the scope, rate of progress, and expenses of our ongoing research activities as well as any preclinical studies, clinical trials and other research and development activities;
- establishing an appropriate safety profile;
- successful enrollment in and completion of clinical trials;
- whether our product candidates show safety and efficacy in our clinical trials;
- receipt of marketing approvals from applicable regulatory authorities;
- establishing commercial manufacturing capabilities or making arrangements with third-party manufacturers;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our product candidates;
- commercializing product candidates, if and when approved, whether alone or in collaboration with others; and
- continued acceptable safety profile of products following any regulatory approval.

Any changes in the outcome of any of these variables with respect to the development of our product candidates in preclinical and clinical development could mean a significant change in the costs and timing associated with the development of these product candidates. We may never succeed in achieving regulatory approval for any of our product candidates. We may obtain unexpected results from our clinical trials. We may elect to discontinue, delay or modify clinical trials of some product candidates or focus on other product candidates. For example, if the U.S. Food and Drug Administration, or the FDA, the European Medicines Agency, or EMA, or another regulatory authority were to delay our planned start of clinical trials or require us to conduct clinical trials or other testing beyond

those that we currently expect or if we experience significant delays in enrollment in any of our ongoing and planned clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development of that product candidate.

General and Administrative Expenses

General and administrative expense consists primarily of employee related costs, including salaries, bonuses, benefits, share-based compensation and other related costs, as well as expenses for outside professional services, including legal, accounting and audit services and other consulting fees, rent expense, directors and officers insurance expenses, investor and public relations expenses and other general administrative expenses.

We anticipate that our general and administrative expenses will increase in the future as we increase our headcount to support our continued research activities and development of our product candidates. We also anticipate that we will continue to incur significant accounting, audit, legal, regulatory, compliance and directors and officers insurance costs as well as investor and public relations expenses associated with operating as a public company.

Other Income (Expense), Net

Other income (expense), net consists primarily of realized and unrealized gains and losses on foreign exchange, interest income earned on cash and cash equivalents and marketable securities, and other expenses such as interest and bank charges.

Realized and unrealized gains and losses on foreign exchange consist of realized and unrealized gains and losses from holding cash and foreign currency denominated other receivables, accounts payable, accrued expenses and other current liabilities as well as operating lease liabilities.

Results of Operations

Comparison of the Three Months Ended March 31, 2023 and 2022

The following table summarizes our results of operations for the three months ended March 31, 2023 and 2022:

	Three Months Ended March 31,		
	2023	2022	Change
		(in thousands)	
Revenue:			
Collaboration agreements	$ 5,678	$ 408	$ 5,270
Operating expenses:			
Research and development, net of tax credits	31,830	26,458	5,372
General and administrative	8,529	8,779	(250)
Total operating expenses	40,359	35,237	5,122
Loss from operations	(34,681)	(34,829)	148
Other income (expense), net			
Realized and unrealized loss on foreign exchange	(56)	(17)	(39)
Interest income	3,427	129	3,298
Other expense	(15)	(8)	(7)
Total other income, net	3,356	104	3,252
Loss before income taxes	(31,325)	(34,725)	3,400
Income tax expense	(3,616)	(32)	(3,584)
Net loss	$ (34,941)	$ (34,757)	$ (184)

Revenue

We recognized $5.3 million and nil for the three months ended March 31, 2023 and 2022, respectively as revenue associated with the Roche Agreement in relation to the partial recognition of deferred revenue for research and development services performed towards the completion of the Continuing Trials during the period.

We also recognized $0.4 million for the three months ended March 31, 2023 and 2022 as revenue associated with the BMS Agreement in relation to the partial recognition of deferred revenue for research activities performed.

Research and Development Expenses, Net of Tax Credits

Research and development expenses were $31.8 million for the three months ended March 31, 2023, compared to $26.5 million for the three months ended March 31, 2022. The increase of $5.3 million was primarily due to:

- a $3.1 million increase in direct external costs mostly related to the advancement of preclinical programs into IND-enabling studies;
- a $2.7 million increase in personnel-related costs, including a $0.9 million increase in share-based compensation, primarily related to headcount in support of our development activities; and
- a $0.5 million decrease in other research and material expense.

General and Administrative Expenses

General and administrative expenses were $8.6 million for the three months ended March 31, 2023, compared to $8.8 million for the three months ended March 31, 2022. The decrease of $0.2 million in general and administrative expenses consisted of:

- a $0.9 million increase in personnel related costs, including a $0.4 million increase in share-based compensation;
- a $0.6 million decrease in our D&O insurance premium; and
- a $0.5 million decrease in professional fees associated with the collaboration and license agreement with Roche.

Other Income (Expense), Net

Other income, net was $3.4 million and $0.1 million for the three months ended March 31, 2023 and 2022, respectively. The increase of $3.3 million was primarily attributable to higher sums invested in cash and cash equivalents and marketable securities as well as higher interest rates.

Income Tax Recovery (Expense)

The income tax expense of $3.6 million for the three months ended March 31, 2023 primarily reflected the taxable income in our U.S. subsidiary partially offset by federal and state research and development tax credits, as well as the non-recognition of any tax benefit related to our net deferred tax assets.

The income tax expense of nil for the three months ended March 31, 2022 primarily reflected U.S. federal and state research and development tax credits generated, offset by taxable income in our U.S. subsidiary.

Liquidity and Capital Resources

Since our inception, we have not recognized any revenue from product sales and have incurred operating losses and negative cash flows from our operations. We have not yet commercialized any product and we do not expect to generate revenue from sales of any products for several years, if at all. On June 2020, we completed our IPO whereby we issued an aggregate of 12,650,000 common shares, which includes the exercise in full of the underwriters' option to purchase up to an additional 1,650,000 common shares, at a public offering price of $20.00 per share. The aggregate net proceeds received by us from the IPO were $232.0 million, after deducting underwriting commissions, and offering expenses of $3.2 million. In November 2021, we completed a follow-on offering whereby we issued 4,600,000 common shares, including the exercise in full by the underwriters of their option to purchase up to 600,000 additional common shares, at a public offering price of $22.00 per share, for net proceeds of $94.3 million, after deducting underwriting commissions as well as offering expenses of $0.8 million.

In August 2022, we entered into a Common Shares Sale Agreement, or the Sales Agreement, with Cowen and Company, LLC as sales agent, pursuant to which we may issue and sell common shares from time to time, or the ATM Shares. The ATM Shares to be sold under the Sales Agreement, if any, will be issued and sold pursuant to our shelf registration statement on Form S-3 (File No. 333-257668), up to a maximum aggregate amount of $125.0 million. No shares have been issued under the Sales Agreement as of the date of this Quarterly Report on Form 10-Q.

Prior to our IPO, we had funded our operations primarily through equity financings, having raised an aggregate of approximately $135.2 million of gross proceeds from the sale of our preferred shares and $15.0 million of gross proceeds from the issuance of a warrant to acquire our common shares. We have also partnered with Ono for our Polθ inhibitor program and Bristol Myers Squibb for research and development of potential new product candidates for the treatment of cancer and received initial upfront and additional payments

of approximately $60.5 million in the aggregate. In June 2022, we entered into a collaboration and license agreement with Roche for camonsertib and have received initial payments under the terms of the collaboration in the aggregate amount of $134.6 million.

We expect to incur significant expenses and operating losses for the foreseeable future as we advance our product candidates through preclinical and clinical development, seek regulatory approval and pursue commercialization of any approved product candidates and we will continue to incur additional costs associated with operating as a public company. We expect that our research and development and general and administrative costs will increase in connection with our planned research and development activities.

Beginning in 2022, the Tax Cuts and Jobs Act of 2017 eliminates the option to deduct U.S.-based research and development expenditures in the current fiscal year and requires taxpayers to amortize them over five years pursuant to Internal Revenue Code Section 174. This provision has increased our 2022 cash payments of income taxes significantly as compared to 2021. Although Congress is considering legislation that would defer the amortization requirement to later years, we have no assurance that the provision will be repealed or otherwise modified. If the requirement is not modified, it will materially reduce our cash flows. Changes in our tax provisions or an increase in our tax liabilities, whether due to changes in applicable laws and regulations or our interpretation or application thereof, could have a material adverse effect on our financial position, results of operations and/or cash flows.

As of March 31, 2023, our cash and cash equivalents and marketable securities on hand was $314.1 million. We believe that our existing cash and cash equivalents and marketable securities on hand will be sufficient to fund our anticipated operating and capital expenditure requirements into 2026. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our capital resources sooner than we expect. If we receive regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses related to product manufacturing, sales, marketing, and distribution, depending on where we choose to commercialize. We may also require additional capital to pursue in-licenses or acquisitions of other product candidates.

Because of the numerous risks and uncertainties associated with research, development, and commercialization of our product candidates, we are unable to estimate the exact amount of our working capital requirements. Our future capital requirements will depend on many factors, including:

- the initiation, timing, costs, progress and results of our product candidates, including our ongoing Phase 1 clinical trials of RP-6306;
- the progress of preclinical development and possible clinical trials of our current earlier-stage programs;
- the scope, progress, results and costs of our research programs and preclinical development of any additional product candidates that we may pursue;
- the development requirements of other product candidates that we may pursue;
- our headcount growth and associated costs as we expand our research and development and establish a commercial infrastructure;
- the timing and amount of milestone and royalty payments that we are required to make or eligible to receive under our current or future collaboration agreements, including the Roche Agreement;
- the outcome, timing and cost of meeting regulatory requirements established by the FDA, EMA and other regulatory authorities;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our product candidates for which we or our collaborators receive marketing approval;
- the cost of expanding, maintaining and enforcing our intellectual property portfolio, including filing, prosecuting, defending and enforcing our patent claims and other intellectual property rights;
- the cost of defending potential intellectual property disputes, including patent infringement actions brought by third parties against us or any of our product candidates;
- the effect of competing technological and market developments;
- the cost and timing of completion of commercial-scale manufacturing activities;
- the extent to which we partner our programs, acquire or in-license other product candidates and technologies or enter into additional strategic collaborations;

- the revenue, if any, received from commercial sales of camonsertib, RP-6306 and any future product candidates for which we or our collaborators receive marketing approval; and
- the costs of operating as a public company.

Until such time, if ever, as we can generate substantial product revenues to support our cost structure, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations and other similar arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our shareholders will be or could be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our common shareholders. Debt financing and equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise funds through collaborations, or other similar arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to us and/or may reduce the value of our common shares. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market our product candidates even if we would otherwise prefer to develop and market such product candidates ourselves.

Cash Flows

Comparison of the Three Months Ended March 31, 2023 and 2022

The following table summarizes our cash flows for each of the periods presented:

	Three Months Ended March 31,		
	2023	2022	Change
		(in thousands)	
Net cash used in operating activities	$ (31,786)	$ (30,006)	$ (1,780)
Net cash (used in) provided by investing activities	(6,686)	403	(7,089)
Net cash provided by financing activities	413	241	172
Effect of exchange rate fluctuations on cash held	(1)	71	(72)
Net Decrease In Cash And Cash Equivalents	$ (38,060)	$ (29,291)	$ (8,769)

Operating Activities

Net cash used in operating activities was $31.8 million for the three months ended March 31, 2023, reflecting a net loss of $34.9 million, a net change of $2.1 million in our net operating assets and non-cash charges of $5.3 million. The non-cash charges primarily consist of share-based compensation for option and restricted share unit grants to employees, as well as depreciation expense, and non-cash lease expense offset by the net accretion of marketable securities. The change in our net operating assets was primarily due to a decrease of $6.5 million in accrued expenses and other current liabilities, operating lease liability, and deferred revenue as well as an increase of $2.5 million in collaboration revenue receivable, offset by an increase of $5.6 million in accounts payable and income taxes payable as well as a decrease of $1.3 million in prepaid expenses.

Net cash used in operating activities was $30.0 million for the three months ended March 31, 2022, reflecting a net loss of $34.8 million, offset by non-cash charges of $4.5 million. The non-cash charges primarily consist of share-based compensation for option grants to employees, as well as depreciation expense, and non-cash lease expense offset by deferred taxes.

The $1.8 million increase in cash used in operating activities for the three months ended March 31, 2023 compared to the three months ended March 31, 2022 is primarily due to the increase in our operating assets from timing of collections of collaboration revenue receivable offset by decreases in accrued expensed and other current liabilities.

Investing Activities

Net cash used in investing activities was $6.7 million for the three months ended March 31, 2023 and resulted primarily from the purchases of marketable securities and property and equipment offset by proceeds on maturities of marketable securities.

Net cash provided by investing activities was $0.4 million for the three months ended March 31, 2022 and resulted from the proceeds on maturities of marketable securities offset by the purchases of marketable securities and property and equipment.

Financing Activities

Net cash provided by financing activities was $0.4 million consisting of net proceeds from the issuance of common shares under the ESPP for the three months ended March 31, 2023.

Net cash provided by financing activities was $0.2 million consisting of net proceeds from the exercise of stock options and issuance of common shares under the ESPP for the three months ended March 31, 2022.

Material Cash Requirements

There were no material changes to our material cash requirements during the three months ended March 31, 2023 from those described under "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the Annual Report.

Critical Accounting Estimates

This management's discussion and analysis is based on our unaudited condensed consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these unaudited condensed consolidated financial statements requires us to make judgments and estimates that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the unaudited condensed consolidated financial statements and the reported amounts of expenses during the reported periods. We base our estimates on historical experience, known trends and events, and various other factors that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. On an ongoing basis, we evaluate our judgments and estimates in light of changes in circumstances, facts, and experience. The effects of material revisions in estimates, if any, will be reflected in the consolidated financial statements prospectively from the date of change in estimates.

There have been no significant changes to our critical accounting estimates from those described in "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in the Annual Report.

Recently Adopted Accounting Pronouncements

See Note 2 to our annual consolidated financial statements included in the Annual Report for a description of recent accounting pronouncements applicable to our financial statements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Under SEC rules and regulations, because we are considered to be a "smaller reporting company," we are not required to provide the information required by this item in this report.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

We maintain "disclosure controls and procedures," as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to our management, including our principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2023. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of such date, our disclosure controls and procedures are effective.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act that occurred during the period covered by this Quarterly Report on Form 10-Q that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving the desired control objectives. Our management recognizes that any control system, no matter how well designed and operated, is based upon certain judgments and assumptions and cannot provide absolute assurance that its objectives will be met. Similarly, an evaluation of controls cannot provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. We are not currently a party to any material legal proceedings, and we are not aware of any pending or threatened legal proceeding against us that we believe could have an adverse effect on our business, operating results or financial condition.

Item 1A. Risk Factors.

Investing in our common shares involves a high degree of risk. In addition to the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the risks described in the Annual Report, including the disclosure therein under Part I, Item 1A, "Risk Factors," before deciding whether to invest in our common shares. These are not the only risks facing our business. Other risks and uncertainties that we are not currently aware of or that we currently consider immaterial also may materially adversely affect our business, financial condition and future results. Risks we have identified but currently consider immaterial could still also materially adversely affect our business, financial condition and future results of operations if our assumptions about those risks are incorrect or if circumstances change.

There were no material changes during the period covered in this report to the risk factors previously disclosed in Part I, Item 1A of the Annual Report, except as follows:

Enacted and future healthcare legislation may increase the difficulty and cost for us to progress our clinical programs and obtain marketing approval of and commercialize our product candidates and may affect the prices we may set.

In the United States and other jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes and proposed changes to the healthcare system that could affect our future results of operations. For example, in March 2010, the Patient Protection and Affordable Care Act, or the ACA, was enacted, which substantially changed the way healthcare is financed by both governmental and private insurers. Among the provisions of the ACA, those of greatest importance to the pharmaceutical and biotechnology industries include the following:

- an annual, non-deductible fee payable by any entity that manufactures or imports certain branded prescription drugs and biologic agents (other than those designated as orphan drugs), which is apportioned among these entities according to their market share in certain government healthcare programs;
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to certain individuals with income at or below 133% of the federal poverty level, thereby potentially increasing a manufacturer’s Medicaid rebate liability;
- a licensure framework for follow on biologic products;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research; and
- establishment of a Center for Medicare & Medicaid Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending.

There have been judicial, Congressional and executive branch challenges to certain aspects of the ACA. For example, on June 17, 2021, the U.S. Supreme Court dismissed a challenge on procedural grounds that argued the ACA is unconstitutional in its entirety because the “individual mandate” was repealed by Congress. Moreover, prior to the U.S. Supreme Court ruling, on January 28, 2021, President Biden issued an executive order that initiated a special enrollment period for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. Further, on August 16, 2022, President Biden signed the Inflation Reduction Act of 2022, or IRA, into law, which among other things, extends enhanced subsidies for individuals purchasing health insurance coverage in ACA marketplaces through plan year 2025. The IRA also eliminates the “donut-hole” under the Medicare Part D program beginning in 2025 by significantly lowering the beneficiary maximum out-of-pocket cost and through a newly established manufacturer discount program. It is possible

that the ACA will be subject to judicial or Congressional challenges in the future. It is also unclear how any such challenges and other litigation, and further healthcare reform measures of the Biden administration will impact the ACA and our business.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted. In August 2011, the Budget Control Act of 2011, among other things, led to aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect in April 2013 and, due to subsequent legislative amendments to the statute will remain in effect until 2032 unless additional action is taken by Congress. On March 11, 2021, President Biden signed the American Rescue Plan Act of 2021 into law, which eliminates the statutory Medicaid drug rebate cap, currently set at 100% of a drug's average manufacturer price, for single source and innovator multiple source drugs, beginning January 1, 2024. In January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws or any other similar laws introduced in the future may result in additional reductions in Medicare and other health care funding, which could negatively affect our customers and accordingly, our financial operations.

Moreover, payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives. For example, CMS may develop new payment and delivery models, such as bundled payment models. In addition, recently there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several U.S. Congressional inquiries and proposed and enacted federal legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, and review the relationship between pricing and manufacturer patient programs. For example, in July 2021, the Biden administration released an executive order, "Promoting Competition in the American Economy," with multiple provisions aimed at prescription drugs. In response to Biden's executive order, on September 9, 2021, the U.S. Department of Health and Human Services, or HHS released a Comprehensive Plan for Addressing High Drug Prices that outlines principles for drug pricing reform and sets out a variety of potential legislative policies that Congress could pursue as well as potential administrative actions HHS can take to advance these principles. In addition, the IRA, among other things, (1) directs HHS to negotiate the price of certain single source drugs and biologics covered under Medicare and (2) imposes rebates under Medicare Part B and Medicare Part D to penalize price increases that outpace inflation. The IRA permits HHS to implement many of these provisions through guidance, as opposed to regulation, for the initial years. HHS has and will continue to issue and update guidance as these programs are implemented. These provisions will take effect progressively starting in fiscal year 2023, although they may be subject to legal challenges. It is currently unclear how the IRA will be implemented, but it is likely to have a significant impact on the pharmaceutical industry. Further, in response to the Biden administration's October 2022 executive order, on February 14, 2023, HHS released a report outlining three new models for testing by the CMS Innovation Center which will be evaluated on their ability to lower the cost of drugs, promote accessibility, and improve quality of care. It is unclear whether the models will be utilized in any health reform measures in the future. We expect that additional U.S. federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that the U.S. federal government will pay for healthcare products and services, which could result in reduced demand for our product candidates or additional pricing pressures.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

(a) Recent Sales of Unregistered Securities

None.

(b) Issuer Purchases of Equity Securities

None.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

None.

Item 6. Exhibits.

Exhibit Number	Description	Incorporated by Reference			
		Schedule Form	File Number	Exhibit	Filing Date
3.1	Articles of Continuance of Repare Therapeutics Inc.	8-K	001-39335	3.1	June 23, 2020
3.2	Amended and Restated Bylaws of Repare Therapeutics Inc.	8-K	001-39335	3.2	June 23, 2020
10.1*+	Lease Amendment Agreement No.1 by and between the registrant, Repare Therapeutics Inc. and NEOMED Institute, dated April 1, 2023				
31.1**	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
31.2**	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
32.1+	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
32.2+	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
101.INS*	Inline XBRL Instance Document				
101.SCH*	Inline XBRL Taxonomy Extension Schema Document				
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document				
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document				
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document				
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document				
104	Inline Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)				

* Filed herewith.

** This certification is being furnished solely to accompany this Quarterly Report on Form 10-Q pursuant to 18 U.S.C. Section 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing of the registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

+ Certain schedules and exhibits to this exhibit have been omitted pursuant to Item 601(a)(5) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the SEC upon request.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

REPARE THERAPEUTICS INC.

Date: May 9, 2023

By: /s/ Lloyd M. Segal
Lloyd M. Segal
President and Chief Executive Officer
(Principal Executive Officer)

Date: May 9, 2023

By: /s/ Steve Forte
Steve Forte
Executive Vice President, Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

EXHIBIT 10.1

[***] Certain schedules and exhibits to this exhibit have been omitted pursuant to Item 601(a)(5) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the SEC upon request.

LEASE AMENDMENT AGREEMENT No 1 dated effective April 1, 2023

BETWEEN: **NEOMED INSTITUTE**, duly incorporated under Canada Not-for-profit Corporations Act, having received its certificate of incorporation on November 16, 2012, with its head office at 7171, Frederick-Banting, City of Montreal, judicial district of Montreal, Province of Quebec, H4S 1Z9, herein acting and represented by Matthew Carlyle, CFO, NEOMED Institute, duly authorized for the purposes hereof.

Hereinafter referred to as the "**LESSOR**"

AND: **REPARE THERAPEUTICS INC.**, Business Corporations Act (Québec), with its head office at 7210, Frederick-Banting, Suite #100, in the City of Montreal, judicial district of Montreal, Province of Quebec, Canada H4S 2A1 herein acting and represented by Christopher Kendall, VP Finance and FP&A, duly authorized for the purposes hereof;

Hereinafter referred to as the "**LESSEE**"

Hereinafter collectively referred to as the "**PARTIES**"

WHEREAS the Lessor and the Lessee entered into the certain Lease Agreement dated January 1st, 2023 (the "Lease"), the Parties wish to modify the Lease with this Lease Amendment Agreement, addressing the additional requested premises.

WHEREAS the Parties wish to modify the Lease with this Amendment (the "**Amendment No 1**"), addressing the addition of room #2238.

NOW, THEREFORE in consideration of the foregoing and the mutual covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follow:

1. Rent

Section 3.1.7 of the Lease is hereby modified by including the following:

For the First (1st) and Second (2nd) years of the Term, commencing April 1st, 2023 and terminating on December 31st, 2024, a Base Rent at the rate of twenty-five Dollars ($25.00) per square foot for room #2238 per annum, being a sum of two hundred and eight Dollars and thirty-three Cents ($208.33) per month, plus applicable taxes in accordance with Section 3.7 herein, payable in advance, without deduction or abatement, by way of equal and consecutive monthly instalments on the first day of each month;

Section 3.1.8 of the Lease is hereby modified by including the following:

For the Third (3rd) year of the Term, commencing January 1st, 2025 and terminating on August 31st, 2025, a Base Rent at the rate of twenty-five Dollars and seventy-five Cents ($25.75) per square foot for room #2238 per annum, being a sum of two hundred and fourteen Dollars and fifty-eight Cents ($214.58) per month, plus applicable taxes in accordance with Section 3.7 herein, payable in advance, without deduction or abatement, by way of equal and consecutive monthly instalments on the first day of each month;

Section 3.3 of the Lease is hereby modified by including the following:

The Additional Rent for the First (1st), Second (2nd) & Third (3rd) years of the Term is currently estimated at thirty-eight Dollars and nineteen Cents ($38.19) per square foot for rooms #2238, including the management fee equal to Fifteen percent (15%) of the applicable annual Base Rent.

2. Plan of the leased premises

Schedule B (*Plan of the leased premises*) is hereby repealed and replaced as follows: [***]

3. Square footage of leased premises

Schedule F (*Square Footage of Leased Premises*) is hereby repealed and replaced as follows: [***]

IN WITNESS WHEREOF THE PARTIES HAVE SIGNED THIS AMENDMENT EFFECTIVE AS OF THE EFFECTIVE DATE ABOVE AND BINDING ON THE PARTIES.

IN THE PRESENCE OF:

LESSOR: NEOMED INSTITUTE

7171, Frederick Banting
Montreal (Quebec)
H4S 1Z9
/s/ Matthew Carlyle
Matthew Carlyle, CFO

LESSEE: REPARE THERAPEUTICS INC.

7210, Frederick-Banting, suite #100
Montreal (Quebec)
H4S 2A1
/s/ Christopher Kendall
Christopher Kendall, VP Finance & FP&A

Exhibit 31.1

CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Lloyd M. Segal, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Repare Therapeutics Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13(a)-15(f) and 15(d)-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 9, 2023

By: /s/ Lloyd M. Segal
Lloyd M. Segal
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Steve Forte, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Repare Therapeutics Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13(a)-15(f) and 15(d)-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 9, 2023

By: /s/ Steve Forte
Steve Forte
Executive Vice President, Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Repare Therapeutics Inc. (the "Company") for the period ended March 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Lloyd M. Segal, President and Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 9, 2023

/s/ Lloyd M. Segal
Lloyd M. Segal
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Repare Therapeutics Inc. (the "Company") for the period ended March 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Steve Forte, Chief Financial Officer of the Company, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 9, 2023

/s/ Steve Forte

Steve Forte
Executive Vice President, Chief Financial Officer
(*Principal Financial Officer)*