

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

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): February 28, 2024

Repare Therapeutics Inc.

(Exact name of Registrant as Specified in Its Charter)

Quebec
(State or Other Jurisdiction
of Incorporation)

001-39335
(Commission File Number)

Not applicable
(IRS Employer
Identification No.)

7171 Frederick-Banting, Building 2, Suite 270
St-Laurent, Quebec, Canada
(Address of Principal Executive Offices)

H4S 1Z9
(Zip Code)

Registrant's Telephone Number, Including Area Code: 857 412-7018

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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 is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

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.

Item 2.02 Results of Operations and Financial Condition.

On February 28, 2024, Repare Therapeutics Inc. (the "Company") issued a press release announcing its recent business highlights and financial results for the three and twelve months ended December 31, 2023. A copy of the press release is furnished hereto as Exhibit 99.1 and is incorporated herein by reference.

The information in this Current Report on Form 8-K, including Exhibit 99.1 attached hereto, is being furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section. The information contained herein and in the accompanying exhibit is not incorporated by reference in any filing of the Company under the Securities Act of 1933, as amended, or the Exchange Act, whether made before or after the date hereof, regardless of any general incorporation language in such filing, except as shall be expressly set forth by specific reference in such filing.

Item 9.01 Financial Statements and Exhibits.

Exhibit

No.	Description
99.1	Press Release dated February 28, 2024
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

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 hereunto duly authorized.

REPARE THERAPEUTICS INC.

Date: February 28, 2024

By: /s/ Lloyd M. Segal

Lloyd M. Segal

President and Chief Executive Officer

Repare Therapeutics Provides Business Update and Reports Fourth Quarter and Full Year 2023 Financial Results

CAMBRIDGE, Mass. & MONTREAL (BUSINESS WIRE)—February 28, 2024— Repare Therapeutics Inc. (“Repare” or the “Company”) (Nasdaq: RPTX), a leading clinical-stage precision oncology company, today reported financial results for the fourth quarter and full year ended December 31, 2023.

“2023 was a year of substantial progress for Repare. We advanced each of the four programs in our portfolio and set the stage for meaningful data readouts and new clinical trial starts this year,” said Lloyd M. Segal, President and Chief Executive Officer of Repare. “In particular and as leaders and innovators in PKMYT1 inhibition, we look forward to data readouts across all ongoing lunresertib clinical trials in 2024 and are excited to begin a lunresertib and WEE1 combination clinical trial in partnership with Debiopharm.”

2023 and Recent Portfolio Highlights:

- Lunresertib
 - Presented initial positive data from its ongoing Phase 1 MYTHIC trial evaluating lunresertib (RP-6306) alone and in combination with camonsertib in patients with advanced solid tumors harboring *CCNE1* amplification or *FBXW7* or *PPP2R1A* deleterious alterations at the 2023 American Association for Cancer Research (AACR)-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics. Initial combination data included an overall RECIST response rate of 50% in ten patients with heavily pre-treated gynecological tumors at the preliminary recommended Phase 2 dose.
 - Announced a partnership with Debiopharm to explore the potential clinical synergy of Debio 0123, a highly selective clinical WEE1 inhibitor, and lunresertib, with dosing of the first patient expected to occur in the first half of 2024 and for which the companies have developed substantial pre-clinical validation. Repare will sponsor the global clinical trial as a new arm in the ongoing MYTHIC trial, with costs being shared equally by Debiopharm and Repare.
 - Camonsertib
 - Presented initial clinical data from the Phase 1/2 TRESR and ATTACC trials evaluating camonsertib (RP-3500) in combination with three poly (ADP-ribose) polymerase (PARP) inhibitors in a Clinical Trials Plenary Session at the 2023 AACR Annual Meeting. Camonsertib, a potent and selective oral small molecule inhibitor of ATR (Ataxia-Telangiectasia and Rad3-related protein kinase), showed 48% overall clinical benefit rate in patients with advanced solid tumors across tumor types regardless of choice of PARP inhibitor or platinum resistance, with a favorable safety and tolerability profile. Data from the TRESR trial were also published in *Nature Medicine* highlighting the clinical benefit of camonsertib in advanced solid tumors.
 - Upon dosing of the first patient with camonsertib in Roche’s Phase 2 TAPISTRY trial (NCT04589845), Repare earned a \$40 million milestone payment from its collaboration with Roche, which was subsequently received in February 2024. In October 2023, Roche also dosed the first patient in a camonsertib-based arm in its Phase 1b/2 clinical trial of multiple immunotherapy-based treatment
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combinations in participants with metastatic non-small cell lung cancer (Morpheus Lung; NCT03337698).

- Since inception of the Roche camonsertib collaboration, Repare has earned a cumulative total of \$182.6 million pursuant to the Roche collaboration agreement, including the upfront payment, the milestone payment, as well as additional reimbursements from Roche. In February 2024, Repare received written notice from Roche of their election to terminate the Roche collaboration agreement. The termination will become effective in May 2024, at which time Repare will regain global development and commercialization rights for camonsertib from Roche.
- RP-1664
 - Dosed the first patient in the multicenter, open-label Phase 1 dose escalation trial of RP-1664 in adult and adolescent patients with TRIM37-high solid tumors in February 2024. Repare disclosed polo-like kinase 4 (PLK4) as the target of the RP-1664 development program and reported that RP-1664 demonstrated potent and selective inhibition of PLK4 and synthetic lethality in TRIM37-high tumor cells in preclinical studies.
- RP-3467
 - Reported comprehensive preclinical data for RP-3467, a potential best-in-class Pol θ ATPase inhibitor. RP-3467 demonstrated complete, sustained regressions preclinically in combination with PARP inhibitors, and compelling anti-tumor activity in combination with radioligand therapy and chemotherapy.

2024 Outlook:

- Initiate a Phase 1/1b clinical trial of lunresertib and Debio 0123, a WEE1 inhibitor, in the first half of 2024 as a fourth arm of the ongoing MYTHIC clinical trial.
- Report initial data from the Phase 1 MINOTAUR trial evaluating lunresertib in combination with FOLFIRI for the treatment of advanced solid tumors in the first half of 2024.
- Disclose additional camonsertib clinical development plans beyond the TRESR and ATTACC clinical trials sponsored by Repare in the second quarter of 2024.
- Report data from the dose expansion cohorts of the Phase 1 MYTHIC trial evaluating lunresertib in combination with camonsertib in selectively advanced solid tumors in the second half of 2024.
- Report initial data from the Phase 1 MAGNETIC trial evaluating lunresertib in combination with gemcitabine for the treatment of advanced solid tumors in the second half of 2024. Enrollment in this trial is now closed.
- Initiation of a Phase 1 dose finding trial of RP-3467 in the second half of 2024.

Fourth Quarter and Full Year 2023 Financial Results:

- **Cash, cash equivalents, and marketable securities:** Cash, cash equivalents, and marketable securities as of December 31, 2023 were \$223.6 million. In February 2024, Repare received a \$40 million milestone payment from Roche upon dosing of the first patient with camonsertib in Roche's TAPISTRY trial. The Company believes that its cash, cash equivalents, and marketable securities are sufficient to fund its operations into mid-2026.
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- **Revenue from collaboration agreements:** Revenue from collaboration agreements was \$13.0 million and \$51.1 million for the three- and twelve-month periods ended December 31, 2023, respectively, as compared to \$18.2 million and \$131.8 million for the three- and twelve-month periods ended December 31, 2022, respectively. The decrease in revenue for the three-month period was due to lower deferred revenue recognized from the Roche collaboration and the BMS collaboration. The decrease in revenue for the twelve-month period was primarily due to a decrease in revenue recognized under the Roche collaboration mainly as a result of the \$108.0 million revenue recognized in 2022 pursuant to the satisfaction of the Company's performance obligations for the issuance of the combined licenses and the clinical trial materials transferred. The decrease in the twelve-month period was partially offset by higher deferred revenue recognized from the BMS collaboration and the Ono collaboration.
- **Research and development expenses, net of tax credits (Net R&D):** Net R&D expenses were \$35.3 million and \$133.6 million for the three- and twelve-month periods ended December 31, 2023, respectively, as compared to \$29.9 million and \$119.1 million for the three- and twelve-month periods ended December 31, 2022, respectively. The increase in Net R&D expenses for the three- and twelve-month periods were primarily due to higher personnel-related costs and direct external costs related to the progress of our lunresertib clinical program, as well as the advancement of preclinical programs into IND-enabling studies.
- **General and administrative (G&A) expenses:** G&A expenses were \$8.6 million and \$33.8 million for the three- and twelve-month periods ended December 31, 2023, respectively, compared to \$7.9 million and \$32.6 million for the three- and twelve-month periods ended December 31, 2022, respectively. The increase in G&A expenses was primarily due to higher personnel-related costs, partially offset by lower D&O insurance premiums and reduced professional fees associated with the Roche collaboration agreement.
- **Net loss:** Net loss was \$28.0 million, or \$0.67 per share, and \$93.8 million, or \$2.23 per share, in the three- and twelve-month periods ended December 31, 2023, respectively, and \$31.7 million, or \$0.75 per share, and \$29.0 million, or \$0.69 per share, in the three- and twelve-month periods ended December 31, 2022, respectively.

About Repare Therapeutics' SNIPRx® Platform

Repare's SNIPRx® platform is a genome-wide CRISPR-based screening approach that utilizes proprietary isogenic cell lines to identify novel and known synthetic lethal gene pairs and the corresponding patients who are most likely to benefit from the Company's therapies based on the genetic profile of their tumors. Repare's platform enables the development of precision therapeutics in patients whose tumors contain one or more genomic alterations identified by SNIPRx® screening, in order to selectively target those tumors in patients most likely to achieve clinical benefit from resulting product candidates.

About Repare Therapeutics Inc.

Repare Therapeutics is a leading clinical-stage precision oncology company enabled by its proprietary synthetic lethality approach to the discovery and development of novel therapeutics. The Company utilizes its genome-wide, CRISPR-enabled SNIPRx® platform to systematically discover and develop highly targeted cancer therapies focused on genomic instability, including DNA damage repair. The Company's pipeline includes lunresertib (also known as RP-6306), a PKMYT1 inhibitor currently in Phase 1/2 clinical development; camonsertib (also known as RP-3500), a potential leading ATR inhibitor currently in Phase 1/2 clinical development; RP-1664, a Phase 1 PLK4 inhibitor; RP-3467, a preclinical Polθ ATPase inhibitor program; as well as additional, undisclosed

preclinical programs. For more information, please visit www.reparerx.com and follow @Reparerx on X (formerly Twitter) and LinkedIn.

SNIPRx® is a registered trademark of Repare Therapeutics Inc.

Forward-Looking Statements

This press release contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995 and securities laws in Canada. All statements in this press release other than statements of historical facts are “forward-looking statements. These statements may be identified by words such as “aims,” “anticipates,” “believes,” “could,” “estimates,” “expects,” “forecasts,” “goal,” “intends,” “may,” “plans,” “possible,” “potential,” “seeks,” “will” and variations of these words or similar expressions that are intended to identify forward-looking statements, although not all forward-looking statements contain these words. Forward-looking statements in this press release include, but are not limited to, statements regarding: the design, objectives, initiation, timing, progress and results of current and future preclinical studies and clinical trials of the Company’s product candidates, including its Phase 1 MYTHIC trial evaluating lunresertib alone and in combination with camonsertib, its MINOTAUR trial evaluating lunresertib in combination with FOLFIRI, its MAGNETIC trial evaluating lunresertib in combination with gemcitabine, its Phase 1/1b trial of Debio 0123 and lunresertib in partnership with Debiopharm, its Phase 1 trial of RP-1664, its Phase 1 trial of RP-3467, and its additional clinical development plans for camonsertib beyond the TRESR and ATTACC clinical trials; the tolerability, efficacy and clinical progress of camonsertib, lunresertib, RP-1664 and RP-3467; the potential of RP-3467 as a best-in-class Pol θ ATPase inhibitor; the potential synergy of Debio 0123 and lunresertib and potential benefits of the collaboration; the Company’s anticipated cash runway; and the benefits and ability to discover further targets and clinical candidates from the Company’s discovery platform. These forward-looking statements are based on the Company’s expectations and assumptions as of the date of this press release. Each of these forward-looking statements involves risks and uncertainties that could cause the Company’s clinical development programs, future results or performance to differ materially from those expressed or implied by the forward-looking statements. Many factors may cause differences between current expectations and actual results, including: the potential that success in preclinical testing and earlier clinical trials does not ensure that later clinical trials will generate the same results or otherwise provide adequate data to demonstrate the efficacy and safety of a product candidate; the impacts of macroeconomic conditions, including the conflict in Ukraine and the conflict in the Middle East, heightened inflation and uncertain credit and financial markets, on the Company’s business, clinical trials and financial position; unexpected safety or efficacy data observed during preclinical studies or clinical trials; clinical trial site activation or enrollment rates that are lower than expected; the Company’s ability to realize the benefits of its collaboration and license agreements; changes in expected or existing competition; changes in the regulatory environment; the uncertainties and timing of the regulatory approval process; and unexpected litigation or other disputes. Other factors that may cause the Company’s actual results to differ from those expressed or implied in the forward-looking statements in this press release are identified in the section titled “Risk Factors” in the Company’s Annual Report on Form 10-K for the year ended December 31, 2023 filed with the Securities and Exchange Commission (“SEC”) and the Québec Autorité des Marchés Financiers (“AMF”) on February 28, 2024. The Company expressly disclaims any obligation to update any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise, except as otherwise required by law. For more information, please visit reparerx.com and follow Repare on Twitter at @RepareRx and on LinkedIn at <https://www.linkedin.com/company/repare-therapeutics/>.

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

	As of December 31,	
	2023	2022
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 111,268	\$ 159,521
Marketable securities	112,359	184,420
Income tax receivable	10,813	—
Other current receivables	4,499	4,323
Prepaid expenses	4,749	5,715
Total current assets	243,688	353,979
Property and equipment, net	4,215	4,228
Operating lease right-of-use assets	3,326	5,371
Income tax receivable	2,276	—
Other assets	396	497
TOTAL ASSETS	\$ 253,901	\$ 364,075
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 2,400	\$ 461
Accrued expenses and other current liabilities	24,057	21,645
Operating lease liabilities, current portion	2,400	2,171
Deferred revenue, current portion	10,222	53,102
Income tax payable	—	1,240
Total current liabilities	39,079	78,619
Operating lease liabilities, net of current portion	1,010	3,257
Deferred revenue, net of current portion	1,730	2,682
TOTAL LIABILITIES	41,819	84,558
Commitments and Contingencies		
SHAREHOLDERS' EQUITY:		
Preferred shares, no par value per share; unlimited shares authorized as of December 31, 2023 and December 31, 2022, respectively; 0 shares issued and outstanding as of December 31, 2023 and December 31, 2022, respectively	—	—
Common shares, no par value per share; unlimited shares authorized as of December 31, 2023 and December 31, 2022; 42,176,041 and 42,036,193 shares issued and outstanding as of December 31, 2023 and December 31, 2022, respectively	483,350	482,032
Additional paid-in capital	61,813	37,226
Accumulated other comprehensive loss	28	(428)
Accumulated deficit	(333,109)	(239,313)
TOTAL SHAREHOLDERS' EQUITY	212,082	279,517
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$ 253,901	\$ 364,075

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

	Year Ended December 31,	
	2023	2022
Revenue:		
Collaboration agreements	\$ 51,133	\$ 131,830
Operating expenses:		
Research and development, net of tax credits	133,593	119,066
General and administrative	33,764	32,560
Total operating expenses	167,357	151,626
Loss from operations	(116,224)	(19,796)
Other income (expense), net		
Realized and unrealized (loss) gain on foreign exchange	(170)	308
Interest income	13,334	5,631
Other expense, net	(119)	(43)
Total other income, net	13,045	5,896
Loss before income taxes	(103,179)	(13,900)
Income tax benefit (expense)	9,383	(15,147)
Net loss	\$ (93,796)	\$ (29,047)
Other comprehensive loss:		
Unrealized gain (loss) on available-for-sale marketable securities	456	(428)
Total other comprehensive income (loss)	\$ 456	\$ (428)
Comprehensive loss	\$ (93,340)	\$ (29,475)
Net loss per share attributable to common shareholders—basic and diluted	\$ (2.23)	\$ (0.69)
Weighted-average common shares outstanding—basic and diluted	42,093,293	41,922,042

	Three Months Ended December 31,	
	2023	2022
Key financial highlights:		
Revenues from collaboration agreements	\$ 13,047	\$ 18,198
Research and development, net of tax credits	\$ 35,266	\$ 29,891
General and administrative	\$ 8,648	\$ 7,939
Net loss	\$ (28,030)	\$ (31,658)
Net loss per share attributable to common shareholders—basic and diluted	\$ (0.67)	\$ (0.75)
Weighted-average common shares outstanding—basic and diluted	42,139,096	41,979,869

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