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): November 07, 2024

Repare Therapeutics Inc.

(Exact name of Registrant as Specified in Its Charter)

Quebec	**001-39335**	**Not applicable**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**
7171 Frederick-Banting, Building 2 Suite 270 St-Laurent, Quebec, Canada		**H4S 1Z9**
(Address of Principal Executive Offices)		**(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 November 7, 2024, Repare Therapeutics Inc. (the "Company") issued a press release announcing its recent business highlights and financial results for the three and nine months ended September 30, 2024. A copy of the press release is furnished hereto as Exhibit 99.1 and is incorporated herein by reference.

The information contained herein and in the accompanying exhibits 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.

The Company's website and any information contained on the Company's website are not incorporated into this Current Report on Form 8-K.

Item 9.01 Financial Statements and Exhibits.

Exhibit No.	Description
99.1	Press Release dated November 7, 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: November 7, 2024

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

Exhibit 99.1

Repare Therapeutics Provides Business and Clinical Update and Reports Third Quarter 2024 Financial Results

On track to report data from the ongoing MYTHIC dose expansion clinical trial at the recommended Phase 2 dose (RP2D) at a company event in December 2024, with the plan to begin a registrational trial in 2025

Presented updated positive safety and tolerability results from the Phase 1 MYTHIC clinical trial at the 36th EORTC-NCI-AACR Symposium on Molecular Targets and Cancer Therapeutics

Dosed first patient in Phase 1 POLAR trial evaluating RP-3467, a Polq ATPase inhibitor, alone and in combination with the PARP inhibitor, olaparib

Presented first-in-human data highlighting the clinical benefits of camonsertib in combination with radiotherapy at the ASTRO annual meeting

CAMBRIDGE, Mass. & MONTREAL (BUSINESS WIRE)—November 7, 2024— Repare Therapeutics Inc. ("Repare" or the "Company") (Nasdaq: RPTX), a leading clinical-stage precision oncology company, today reported financial results for the third quarter ended September 30, 2024.

"We look forward to reporting data from our MYTHIC dose expansion clinical trial evaluating lunresertib in combination with camonsertib at the recommended Phase 2 dose at a company event in December, with the plan to begin a registrational trial in 2025. This combination therapy has the potential to be a new treatment paradigm in genomically-defined platinum-resistant ovarian cancer and second-line endometrial cancer," said Lloyd M. Segal, President and CEO of Repare. "In the third quarter, we continued to make progress across our pipeline, including the dosing of the first patient in the POLAR clinical trial evaluating RP-3467, alone and in combination with the PARP inhibitor, olaparib. Additionally, we presented first-in-human data highlighting the clinical benefits of camonsertib in combination with radiotherapy at the ASTRO annual meeting in collaboration with investigators at Memorial-Sloan Kettering Cancer Center."

Third Quarter 2024 and Recent Portfolio Highlights:

- **Lunresertib (RP-6306): First-in-class, oral PKMYT1 inhibitor**
  - Currently evaluating lunresertib in combination with camonsertib in Repare's MYTHIC dose expansion clinical trial at the RP2D in patients with platinum-resistant ovarian and endometrial cancers harboring CCNE1 amplification or FBXW7 or PPP2R1A mutations, which are predictive of poor prognosis. Repare is on track to report data from approximately 20-30 patients in each cohort in December 2024, with the plan to begin a registrational trial in 2025.
  - Presented positive updated safety and tolerability data from the Phase 1 MYTHIC trial at the RP2D highlighting the benefits of its individualized schedule for the management of anemia at the 36th EORTC-NCI-AACR Symposium on Molecular Targets and Cancer Therapeutics in October 2024. In this analysis, Repare followed patients for approximately nine months at the RP2D to assess the effectiveness of an individualized schedule. The analysis demonstrated a successful approach to mitigating mechanism-based anemia while maintaining clinical benefit. No thrombocytopenia of any

grade nor serious neutropenia in these patients was observed. Dose optimization meaningfully reduced Grade 3 anemia to 22.6% from 51.4% in all patients.

- Presented data at the American Association of Cancer Research's (AACR) 15th Annual Ovarian Cancer Research Symposium in September 2024 highlighting the impact of alterations in FBXW7, PPP2R1A and CCNE1 in patients with metastatic ovarian and endometrial cancers based on an analysis in approximately 2,000 patients from Cancer Genome Atlas Research Network and Memorial Sloan Kettering's Metastatic Events and Tropisms. The data underscores inherent chemotherapy resistance and the lack of treatment options for metastatic gynecologic cancer patients with these biomarkers.
- Evaluating lunresertib in combination with Debio 0123, a highly selective, brain-penetrant, clinical WEE1 inhibitor, in Module 4 of the ongoing MYTHIC clinical trial in patients with advanced solid tumors harboring CCNE1 amplification or FBXW7 or PPP2R1A deleterious alterations. Repare expects to report initial data from Module 4 of the MYTHIC trial in 2025.

- **Camonsertib (RP-3500): Potential best-in-class oral ATR inhibitor**
  - Evaluating camonsertib as a monotherapy in the ongoing non-small cell lung cancer (NSCLC) expansion of the Phase 2 TRESR clinical trial. Camonsertib has demonstrated a promising signal of prolonged progression free survival in patients with ATM-mutated NSCLC in the TRESR clinical trial. Repare expects to report initial data from the TRESR clinical trial in 2025.
  - Presented Phase 1 data from a clinical trial conducted in collaboration with investigators at Memorial-Sloan Kettering Cancer Center highlighting camonsertib in combination with palliative radiation for the treatment of metastatic tumors harboring an ataxia-telangiectasia-mutated (ATM) mutation at the American Society for Radiation Oncology (ASTRO) annual meeting in September 2024. The first-in-human data showed that the combination demonstrated higher clinical benefit in patients with tumors harboring pathogenic ATM mutations versus those with variants of unknown significance.

- **RP-1664: First-in-class, oral, selective PLK4 inhibitor**
  - Evaluating RP-1664 as a monotherapy in the Phase 1 LIONS clinical trial in adult and adolescent patients with TRIM37-high solid tumors, including the recent dosing of the first adolescent patient with neuroblastoma. After evaluating safety in the LIONS clinical trial, the Company expects to rapidly advance RP-1664 into a Phase 1/2 trial in pediatric patients with high risk, recurrent neuroblastoma, where the patients have a high prevalence of TRIM37-altered tumors.

- **RP-3467: Potential best-in-class, oral Polθ ATPase inhibitor**
  - Dosed the first patient in the POLAR clinical trial evaluating RP-3467, a Polθ ATPase inhibitor, alone and in combination with the poly-ADP ribose polymerase (PARP) inhibitor, olaparib. The POLAR clinical trial is a multicenter, open-label, dose-escalation Phase 1 clinical trial to investigate the safety, pharmacokinetics, pharmacodynamics, and preliminary clinical activity of RP-3647 alone or in combination with olaparib in adults with molecularly selected advanced solid tumors. The trial is expected to enroll patients with locally advanced or metastatic epithelial ovarian cancer, metastatic breast cancer, metastatic castration-resistant prostate cancer, or pancreatic adenocarcinoma.

- **Other Company Updates**
  - In August 2024, Repare announced a strategic reprioritization of its research and development activities to focus its efforts on the advancement of its portfolio of clinical-stage oncology programs.

As part of this strategic refocus, Repare reduced its overall workforce by approximately 25%, with a majority of the headcount reductions from its preclinical group.

Third Quarter 2024 Financial Results:

- **Cash, cash equivalents and marketable securities:** Cash, cash equivalents and marketable securities as of September 30, 2024 were $179.4 million. The Company believes that its cash, cash equivalents, and marketable securities are sufficient to fund its current operational plans into the second half of 2026.

- **Revenue from collaboration agreements:** Revenue from collaboration agreements were nil and $53.5 million for the three and nine months ended September 30, 2024, respectively, as compared to $2.2 million and $38.1 million for the three and nine months ended September 30, 2023.

- **Research and development expenses, net of tax credits (Net R&D):** Net R&D expenses were $28.4 million and $91.4 million for the three and nine months ended September 30, 2024, respectively, as compared to $32.7 million and $98.3 million for the three and nine months ended September 30, 2023.

- **General and administrative (G&A) expenses:** G&A expenses were $6.4 million and $23.4 million for the three and nine months ended September 30, 2024, respectively, compared to $7.9 million and $25.1 million for the three and nine months ended September 30, 2023.

- **Net loss:** Net loss was $34.4 million, or $0.81 per share, and $56.0 million, or $1.32 per share, in the three and nine months ended September 30, 2024, respectively, compared to $18.9 million, or $0.45 per share, and $65.8 million, or $1.56 per share, three and nine months ended September 30, 2023, respectively.

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 Phase 1 Polθ ATPase inhibitor; as well as additional, undisclosed preclinical programs. For more information, please visit reparerx.com and follow @Reparerx on X (formerly Twitter) and LinkedIn.

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 the Phase 2 MYTHIC trial evaluating lunresertib in

combination with camonsertib in patients with platinum-resistant ovarian and endometrial cancers and plans to begin a registration trial in 2025, the Phase 1 clinical trial in collaboration with Memorial-Sloan Kettering Cancer Center of camonsertib in combination with palliative radiation for the treatment of metastatic tumors, Module 4 of the ongoing Phase 2 MYTHIC trial of lunresertib in combination with Debio 0123 in patients with advanced solid tumors, the Phase 2 TRESR trial of camonsertib in patients with non-small cell lung cancer, the Phase 1 POLAR trial of RP-3467 alone and in combination with olaparib in adults with molecularly selected advanced solid tumors and the Phase 1 LIONS trial of RP-1664 for TRIM37-high solid tumors; the tolerability, efficacy and clinical progress of the Company's product candidates; 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 Quarterly Report on Form 10-Q for the quarter ended September 30, 2024 filed with the Securities and Exchange Commission ("SEC") and the Québec Autorité des Marchés Financiers ("AMF") on November 7, 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 September 30, 2024	As of December 31, 2023
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 80,541	$ 111,268
Marketable securities	98,891	112,359
Income tax receivable	10,974	10,813
Other current receivables	3,253	4,499
Prepaid expenses	6,744	4,749
Total current assets	200,403	243,688
Property and equipment, net	2,748	4,215
Operating lease right-of-use assets	2,473	3,326
Income tax receivable	586	2,276
Other assets	179	396
TOTAL ASSETS	$ 206,389	$ 253,901
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 10,655	$ 2,400
Accrued expenses and other current liabilities	18,212	24,057
Operating lease liability, current portion	2,217	2,400
Deferred revenue, current portion	—	10,222
Total current liabilities	31,084	39,079
Operating lease liability, net of current portion	346	1,010
Deferred revenue, net of current portion	—	1,730
TOTAL LIABILITIES	31,430	41,819
SHAREHOLDERS' EQUITY		
Preferred shares, no par value per share; unlimited shares authorized as of September 30, 2024 and December 31, 2023; 0 shares issued and outstanding as of September 30, 2024, and December 31, 2023	—	—
Common shares, no par value per share; unlimited shares authorized as of September 30, 2024 and December 31, 2023; 42,510,708 and 42,176,041 shares issued and outstanding as of September 30, 2024 and December 31, 2023, respectively	486,674	483,350
Additional paid-in capital	77,272	61,813
Accumulated other comprehensive income	140	28
Accumulated deficit	(389,127)	(333,109)
Total shareholders' equity	174,959	212,082
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	$ 206,389	$ 253,901

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Revenue:				
Collaboration agreements	$ —	$ 2,159	$ 53,477	$ 38,086
Operating expenses:				
Research and development, net of tax credits	28,401	32,709	91,446	98,327
General and administrative	6,444	7,868	23,379	25,116
Restructuring	1,527	—	1,527	—
Total operating expenses	36,372	40,577	116,352	123,443
Loss from operations	(36,372)	(38,418)	(62,875)	(85,357)
Other income (expense), net				
Realized and unrealized (loss) gain on foreign exchange	(19)	(40)	18	(137)
Interest income	2,512	3,312	8,374	10,228
Other expense	(42)	(32)	(95)	(73)
Total other income, net	2,451	3,240	8,297	10,018
Loss before income taxes	(33,921)	(35,178)	(54,578)	(75,339)
Income tax (expense) recovery	(485)	16,299	(1,440)	9,573
Net loss	$ (34,406)	$ (18,879)	$ (56,018)	$ (65,766)
Other comprehensive income:				
Unrealized gain on available-for-sale marketable securities	$ 274	$ 172	$ 112	$ 176
Total other comprehensive income	274	172	112	176
Comprehensive loss	$ (34,132)	$ (18,707)	$ (55,906)	$ (65,590)
Net loss per share attributable to common shareholders - basic and diluted	$ (0.81)	$ (0.45)	$ (1.32)	$ (1.56)
Weighted-average common shares outstanding - basic and diluted	42,452,617	42,102,685	42,377,635	42,077,857

Investor Relations & Media Contact:

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