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): August 1, 2024

Repare Therapeutics Inc.
(Exact Name of Registrant as Specified in Its Charter)

Québec	001-39335	Not applicable
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

7171 Frederick-Banting, Building 2 Suite 270 St-Laurent, Québec, Canada	H4S 1Z9
(Address of Principal Executive Offices)	(Zip Code)

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

Not Applicable
(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	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 2.05 Costs Associated with Exit or Disposal Activities.

On August 1, 2024, the Board of Directors of Repare Therapeutics Inc. (the "Company") approved a strategic reprioritization of its research and development activities to focus its efforts on the advancement of the Company's portfolio of four clinical programs (the "Plan"). As part of the Plan, the Company plans to reduce its overall workforce by approximately 25%, with the majority of the headcount reductions from the Company's preclinical group, with affected employees notified on August 28, 2024.

The Company expects to recognize total charges in connection with the Plan in the range of approximately $1.5 million to $2.0 million, consisting of one-time cash charges for termination benefits. The Company expects that the implementation of the workforce reduction, including related-cash payments, will be substantially complete by the end of the third quarter of 2024.

Item 7.01 Regulation FD Disclosure.

On August 28, 2024, the Company issued a press release announcing the Plan. A copy of the press release is furnished as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated herein by reference.

The information contained in Item 7.01 of this Current Report on Form 8-K, including Exhibit 99.1 attached hereto, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or the Exchange Act, or otherwise subject to the liabilities of that section, and shall not be deemed incorporated by reference into any of the Company's filings 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 8.01 Other Events.

The Company believes that its cash runway will be sufficient to fund its operations into the second half of 2026, which reflects estimated annual cost savings of approximately $15.0 million provided by implementation of the Plan and related workforce reduction.

Cautionary Note Regarding Forward-Looking Statements

Certain statements in this Current Report on Form 8-K 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 Current Report on Form 8-K 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 Form 8-K include, but are not limited to, statements regarding: the Plan and its expected impact on the Company's operations and financial position, including with respect to anticipated cost savings and the Company's anticipated cash runway; and the Company's future plans, including plans for its portfolio of clinical-stage oncology programs. These forward-looking statements are based on the Company's expectations and assumptions as of the date of this Current Report on Form 8-K. 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 Company's ability to implement the Plan as currently contemplated; the actual charges and cash expenditures associated with the Plan being higher than anticipated or changes to the assumptions on which the estimated charges and cash expenditures associated with the Plan are based; the Company's ability to achieve projected cost savings in connection with the Plan; the Company's failure to realize the expected benefits of the Plan and/or the Company experiencing unintended consequences from the Plan that may impact the Company's business. Other factors that may cause the Company's actual results to differ from those expressed or implied in the forward-looking statements in this Current Report on Form 8-K 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, and its other documents subsequently filed with or furnished to the SEC and AMF, including the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2024, filed with the SEC on August 6, 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.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
99.1	Press Release dated August 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.

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

Dated: August 28, 2024

Repare Therapeutics Announces Strategic Reprioritization to Focus on Broad Clinical Portfolio

Focuses Company's resources on its deep clinical oncology pipeline

Positioned to advance four clinical programs through multiple upcoming milestones

CAMBRIDGE, Mass. & MONTREAL—(BUSINESS WIRE)—Aug. 28, 2024—Repare Therapeutics Inc. ("Repare" or the "Company") (Nasdaq: RPTX), a leading clinical-stage precision oncology company, today announced the strategic reprioritization of its research and development activities to focus its efforts on the advancement of its portfolio of clinical-stage oncology programs. With multiple upcoming clinical milestones and potential near-term registration-enabling studies, the Company is streamlining its operations to focus on the advancement of its lunresertib, camonsertib, RP-1664 and RP-3467 programs while materially reducing the scale of its preclinical research and discovery activities.

"We acknowledge today the extraordinary contributions and productivity of our discovery team, who have enabled the development of our deep, innovative clinical portfolio. In our mission to rapidly develop new, practice-changing therapies, we will more fully dedicate our resources to our most promising and advanced precision oncology programs to maximize value for patients and for our shareholders," said Lloyd M. Segal, President and Chief Executive Officer of Repare. "We remain on track to report data from our MYTHIC dose expansion trial evaluating lunresertib in combination with camonsertib in patients with ovarian and endometrial cancers in the fourth quarter of 2024, with the potential to begin a registrational trial in 2025."

As part of this strategic refocus, Repare plans to reduce its overall workforce by approximately 25%, with a majority of the headcount reductions from the Company's preclinical group. Repare expects total non-recurring cash payments of approximately $1.5 million to $2.0 million in the third quarter of 2024 associated with the workforce reduction, and expects to generate annual savings of approximately $15.0 million that will extend its cash runway into the second half of 2026, while aggressively pursuing the further development of its clinical portfolio.

"I want to thank all of our impacted Repare colleagues who have contributed to the pioneering research and innovation, some for more than seven years, to significantly advance Repare in its mission to deliver novel medicines for patients in need," continued Segal.

Clinical Programs and Upcoming Milestones:

Lunresertib (RP-6306): First-in-class, oral small molecule inhibitor of PKMYT1

- Repare expects to report data from the ongoing MYTHIC dose expansion clinical trial of lunresertib and camonsertib at the recommended Phase 2 dose (RP2D) in patients with platinum-resistant ovarian and endometrial cancers harboring *CCNE1* amplification or *FBXW7* or *PPP2R1A* mutations in the fourth quarter of 2024, with the potential to begin a registrational trial in 2025.
- Repare is evaluating lunresertib in combination with Debio 0123, a highly selective, brain-penetrant, clinical WEE1 inhibitor, in Module 4 of the ongoing MYTHIC 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.
- Repare also recently reported positive data from the MINOTAUR trial of lunresertib and FOLFIRI showing promising efficacy and duration of therapy in the heavily pretreated population with tumors that harbor *CCNE1* amplification and *FBXW7* mutation alterations that warrant further development.

Camonsertib (RP-3500): Potential best-in-class oral small molecule inhibitor of ATR

- Repare is 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 trial. Repare expects to report initial data from the TRESR trial in 2025.

RP-1664: First-in-class, highly selective, oral inhibitor of PLK4

- Repare is evaluating RP-1664 as a monotherapy in the Phase 1 LIONS clinical trial in adult and adolescent patients with TRIM37-high solid tumors. After evaluating safety in the LIONS 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 Polq ATPase inhibitor

- Repare expects to initiate a Phase 1 dose-finding clinical trial of RP-3467 in the fourth quarter of 2024.

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 Polq ATPase inhibitor program; as well as additional, undisclosed preclinical programs. For more information, please visit 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 Company's plans for restructuring its workforce and the expected impact of such action, including with respect to anticipated cost savings; the Company's anticipated cash runway; 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 Phase 1 MINOTAUR trial evaluating lunresertib in combination with FOLFIRI, Module 4 of its Phase 1/1b MYTHIC trial, its Phase 1/1b trial of Debio 0123 and lunresertib in partnership with Debiopharm, its Phase 2 TRESR trial of camonsertib in patients with ATMm, its Phase 1 LIONS trial of RP-1664, its Phase 1 trial of RP-3467; its planned expansion of development of lunresertib plus camonsertib combination; its plans to advance RP-1664 into a Phase 1/2 trial in pediatric patients with high risk, recurrent neuroblastoma; a potential registrational trial in 2025; the tolerability, efficacy and clinical progress of camonsertib, lunresertib, RP-1664 and RP-3467; the potential of RP-3467 as a best-in-class Polq ATPase inhibitor; and the potential synergies of Debio 0123 in combination with lunresertib, lunresertib in combination with camonsertib and lunresertib in combination with FOLFIRI. 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 June 30, 2024 filed with the Securities and Exchange Commission ("SEC") and the Québec Autorité des Marchés Financiers ("AMF") on August 6, 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 X (formerly Twitter) at @RepareRx and on LinkedIn at https://www.linkedin.com/company/repare-therapeutics/.

Investor Relations & Media Contact:

Robin Garner
Vice President and Head of Investor Relations
Repare Therapeutics Inc.
investor@reparerx.com