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):
June 20, 2022

RECURSION PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**001-40323**	**46-4099738**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

41 S Rio Grande Street
Salt Lake City, UT 84101
(Address of principal executive offices, including zip code)

(385) 269-0203
(Registrant's telephone number, including area code)

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(s)	Name of each exchange on which registered
Class A common stock, $0.00001 par value per share	**RXRX**	**Nasdaq Global Select Market**

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 8.01 Other Events.

Press Release

On June 20, 2022, Recursion Pharmaceuticals, Inc. issued a press release announcing the initiation of its Phase 2/3 POPLAR-NF2 trial for the treatment of NF2-mutated meningiomas. A copy of the press release is attached hereto as Exhibit 99.1.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
99.1	Press Release, dated June 20, 2022.
104	Cover Page Interactive Data File (formatted as Inline XBRL)

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.

RECURSION PHARMACEUTICALS, INC.

Date: June 21, 2022

By: /s/ Christopher Gibson
Name: Christopher Gibson
Title: Chief Executive Officer

Exhibit 99.1

Recursion Announces Initiation of Phase 2/3 Trial for the Treatment of *NF2*-Mutated Meningiomas at Children's Tumor Foundation NF Conference.

- If successful, REC-2282 could be the first approved treatment for *NF2*-mutated meningiomas, which are debilitating lesions that occur in approximately 33,000 patients per year
- REC-2282 has been granted Fast Track and Orphan Drug designations for NF2 meningiomas by the U.S. Food and Drug Administration, as well as Orphan Drug designation for NF2 meningiomas by the European Commission

SALT LAKE CITY, June 20, 2022 /PRNewswire/ — Recursion (NASDAQ: RXRX), the clinical-stage biotechnology company industrializing drug discovery by decoding biology, today announced the initiation of its Phase 2/3 POPLAR-NF2 clinical trial during the Children's Tumor Foundation NF Conference. The trial will evaluate REC-2282: a potentially first-in-disease, orally bioavailable, central nervous system (CNS) penetrant small molecule histone deacetylase (HDAC) inhibitor, for the treatment of progressive neurofibromatosis type 2 (*NF2)*-mutated meningiomas.

The study is actively enrolling patients who meet criteria including the following:

- >12 years of age and weighing at least 40 kg
- Progressive meningioma that is amenable to volumetric analysis
- Has either 1) sporadic meningioma with confirmed NF2 mutation; or, 2) confirmed diagnosis of NF2 disease (revised Manchester criteria); or, 3) at least one NF2-related tumor (with pathogenic germline or proven mosaic NF2 variant)

POPLAR-NF2: A Parallel-Group, Two-Staged, Phase 2/3, Randomized, Multicenter Study to Evaluate the Efficacy and Safety of REC-2282 in Participants With Progressive *NF2*-Mutated Meningiomas

Glenn Morrison, MSc, PhD; Lisa Boyette, MD, PhD; Meredith Brown-Tuttle, FRAPS; Kerri Cali; Karen King, MS; Diana Shuster, PhD; Helen Wei, PhD; Ramona Doyle
Recursion Pharmaceuticals, Inc.

1 BACKGROUND

- Recursion is a clinical stage biotechnology company decoding biology by **integrating technological innovations** across biology, chemistry, automation, machine learning, and engineering to **industrialize drug discovery**.
- REC-2282 is an orally bioavailable, small-molecule, broad-spectrum inhibitor of histone deacetylase (HDAC) enzymes.[1,2]
- In studies of meningioma and schwannoma cell lines and mouse xenograft models, treatment with REC-2282 inhibited growth of primary cultures of human cell lines, inhibited tumor growth, decreased tumor volume, and induced apoptosis.[3,4]
- The first-in-human clinical trial of REC-2282 resulted in median progression-free survival (PFS) of 1.7 and 9.1 months in patients with non-CNS solid tumors or CNS solid tumors, respectively,[5] suggesting the potential benefit of REC-2282 in schwannoma and meningioma.
- POPLAR-NF2 (NCT05130866) is a Phase 2/3, randomized, multicenter trial to investigate the efficacy and safety of REC-2282 in patients with progressive meningiomas who have either neurofibromatosis type 2 (NF2) disease–related meningioma or sporadic meningiomas that have *NF2* mutations.

2 KEY ELEMENTS

- Being developed for the treatment of progressive *NF2*-mutated meningiomas
- Adult and adolescent patients with familial *NF2* meningiomas or sporadic meningiomas with *NF2* mutation
- Oral bioavailability and CNS exposure together are unique among clinical-stage HDAC inhibitors
- Potentially reduced cardiac toxicity compared to class

3 OBJECTIVES AND ENDPOINTS

Cohort A	Cohort B
Primary	
Efficacy of REC-2282: PFS at 6 months (PFS6)	Efficacy of REC-2282: PFS (time from randomization to progression)
Secondary	
Efficacy of REC-2282: PFS12, PFS24	
Dose response: PFS6 and ORR at each dose level	
Efficacy of REC-2282: ORR, TTR, and DOR	
Safety and tolerability of REC-2282: incidence of AEs, SAEs, and changes in laboratory parameters	
Effect of treatment with REC-2282: time to surgery/radiation for target tumor	
PK of REC-2282: C_{max}, T_{max}, $AUC_{0\text{-}24}$, fu, C_{24}, and C_{trough}	
Exploratory	
Effect of REC-2282 on QoL, physical functioning, meningioma-related symptoms, ophthalmologic findings	
Efficacy of REC-2282 in different *NF2* gene mutations as measured by PFS and ORR	
Efficacy of REC-2282 in adults and adolescents as measured by OS	
Tumor growth rate post-treatment compared to pre-treatment	
Correlation between meningioma-related biomarkers and effect of REC-2282	
Relationship between PK exposure, safety, and efficacy	
PK of the *R*-enantiomer of REC-2282 (REC-1157033) and PK of a REC-2282 metabolite, REC-1157034, and its *R*-enantiomer (REC-1157594)	

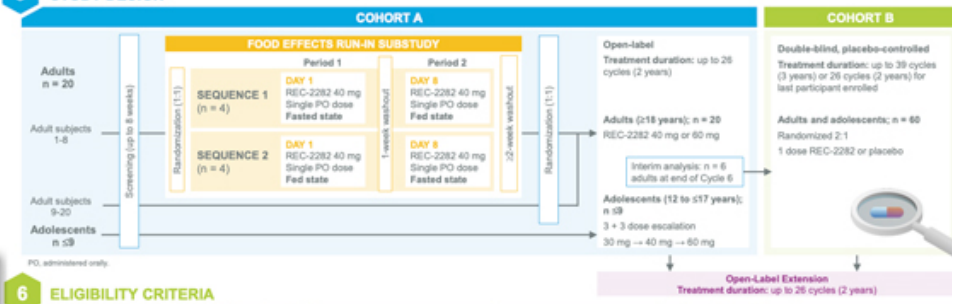
AEs, adverse events; $AUC_{0\text{-}24}$, area under the concentration-time curve from time 0 to 24 hours post-dose; C_{24}, plasma concentration 24 hours post-dose; C_{max}, maximum observed plasma concentration; C_{trough}, plasma concentration at the end of a dosing interval; DOR, duration of response; fu, fraction unbound; ORR, objective response rate; OS, overall survival; PFS12, PFS at 12 months; PFS24, PFS at 24 months; PK, pharmacokinetics; QoL, quality of life; SAEs, serious adverse events; T_{max}, time at which C_{max} is reached; TTR, time to response.

4 METHODS

- Approximately 20 adult and 9 adolescent participants will be randomized to 1 of 2 dose levels of REC-2282 in Cohort A.
  - The first 8 adults enrolled in Cohort A will complete a food effect run-in substudy.
  - Adolescents will participate in a 3 + 3 dose escalation study.
- In Cohort B, approximately 60 adult and adolescent participants will be randomized to a single dose of REC-2282 or placebo in a 2:1 ratio to assess the efficacy and safety of REC-2282 compared with placebo.
- Both cohorts include screening (up to 8 weeks), treatment, a 4-week safety follow-up, and a 6-month follow-up.
- Participants may be eligible for an open-label extension.

POPLAR

5 STUDY DESIGN



PO, administered orally.

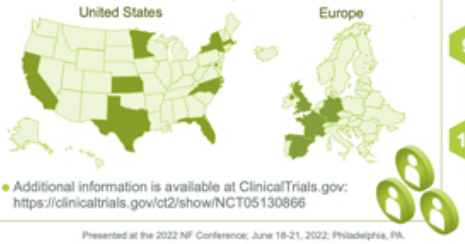
6 ELIGIBILITY CRITERIA

Key Inclusion Criteria	Key Exclusion Criteria
• Adolescents and adults ≥12 years of age weighing ≥40 kg • Progressive meningioma* that is ≥1 cm^3 and amenable to volumetric analysis with no intervention or systemic therapy since last progression • Has either sporadic meningioma† with prior tumor analysis demonstrating *NF2* mutation or a confirmed diagnosis of NF2 disease by Manchester criteria or having ≥1 NF2-related tumor and a pathogenic germline or proven mosaic *NF2* variant • KPS or LPS ≥60 at screening • Adequate bone marrow, renal, and liver function	• Progressive disease associated with significant or disabling symptoms • Prior surgery, radiotherapy/stereotactic radiosurgery or laser interstitial thermal therapy in target tumor (or adjacent) within 6 months of screening • Received antitumor agent within prior 3 months • History of an active malignancy within the previous 3 years‡ • Other investigational drug within 30 days or prior treatment with REC-2282 or another HDAC inhibitor within prior 3 years • Use of drugs or supplements that are inhibitors of BCRP and P-gp, or substrates of CYP2C8 or BCRP for 2 weeks prior to first dose of study drug • Corrected QT interval of >450 ms (men) and >470 ms (women)

BCRP, breast cancer resistance protein; KPS, Karnofsky Performance Status; LPS, Lansky Performance Status; P-gp, P-glycoprotein. *Progressive tumor defined as an increase in target meningioma volume of ≥20% within 12 months prior to enrollment. †For participants with sporadic meningioma, the tumor must be WHO Grade 1 or WHO Grade ≥2 but not amenable to surgery or radiotherapy, or WHO Grade ≥2, but the participant is not willing to undergo surgery or radiotherapy. ‡Except for localized cancers that are considered cured.

7 ENROLLMENT

- Approximately 89 participants will be enrolled across 25 centers
  - **Cohort A:** 29 participants in ~12 sites (10 US, 2 UK)
  - **Cohort B:** 60 participants in ~25 global sites



- Additional information is available at ClinicalTrials.gov: https://clinicaltrials.gov/ct2/show/NCT05130866

8 SUMMARY

POPLAR-NF2 is designed to investigate the efficacy and safety of REC-2282, representing a potential new pharmacologic treatment for patients with progressive *NF2*-mutated meningiomas. Enrollment is ongoing.

9 REFERENCES

1. Burns SS, et al. *Cancer Res.* 2013;73(2):792-803. **2.** Lu Q, et al. *J Med Chem.* 2005;48(17):5530-5535. **3.** Bush ML, et al. *Neuro Oncol.* 2011;13(9):983-999. **4.** Jacob A, et al. *Laryngoscope.* 2012;122(1):174-189. **5.** Collier KA, et al. *Cancer Chemother Pharmacol.* 2021;87(5):599-611.

10 ACKNOWLEDGMENTS

We extend our thanks to the patients, family, and caregivers, as well as to the study staff. This study was funded by Recursion Pharmaceuticals, Inc.

11 DISCLOSURES

GM, LB, MB-T, KC, KK, DS, HW, and RD are employed by Recursion Pharmaceuticals, Inc.

Presented at the 2022 NF Conference; June 18-21, 2022; Philadelphia, PA.

There are currently no FDA-approved drugs for the treatment of patients with NF2, an inherited genetic syndrome that can cause a variety of benign tumors in the central nervous system, including meningiomas. Recursion discovered REC-2282 as a potential candidate for treatment of disease resulting from mutation in the *NF2* gene by leveraging its proprietary AI-powered drug discovery platform, the Recursion OS. We believe this approach, in which machine learning is used to identify relationships between biological contexts and chemical entities, will enable Recursion to accelerate the drug discovery process and expand the scope of potential therapeutic candidates for numerous diseases.

"We are currently crying out for a therapy for inoperable meningiomas and in particular the multiple meningiomas that we see in neurofibromatosis type 2 that cause so much morbidity and ultimately mortality," said Professor Gareth Evans, Manchester University NHS Foundation Trust, St. Mary's Hospital. "An efficacious drug that reduces meningioma size or at least stabilizes tumor growth would be highly impactful for neurofibromatosis type 2 patients, with 60% of even isolated meningiomas in these patients being associated with loss of *NF2* gene function."

"Initiating patient enrollment in our Phase 2/3 POPLAR-NF2 clinical trial marks a significant moment for patients with neurofibromatosis type 2 and sporadic meningiomas driven by mutations in the *NF2* gene," said Glenn Morrison, M.Sc., Ph.D., Vice President of Clinical Development at Recursion.

The Phase 2/3 trial is designed as a randomized, multi-center, double-blind, placebo-controlled study to investigate the safety, efficacy and pharmacokinetics of REC-2282. The study is expected to enroll approximately 90 participants.

For more information about enrollment, please visit this link or reach out to clinicaltrials@recursion.com.

About REC-2282

REC-2282 is a CNS-penetrant, orally bioavailable, small molecule pan-HDAC inhibitor being developed for the treatment of *NF2*-mutated meningiomas. This molecule appears to be well tolerated, including in patients dosed for multiple years, and potentially has reduced cardiac toxicity that would differentiate it from other HDAC inhibitors. Its oral bioavailability and CNS penetrance distinguish it from currently-approved HDAC inhibitors. REC-2282 has been granted Fast Track and Orphan Drug designations for *NF2*-mutated meningiomas by the U.S. Food and Drug Administration, as well as Orphan Drug designation for *NF2*-mutated meningiomas by the European Commission.

About Neurofibromatosis Type 2

NF2 is an autosomal dominant, inherited, rare tumor syndrome caused by loss-of-function mutations in the *NF2* tumor suppressor gene, which encodes the cell signaling regulator protein 'merlin.' Loss of *NF2* function results in growth of the hallmark tumors that characterize this disease: vestibular schwannomas (VS) and meningiomas. The VS and meningioma tumor types seen in NF2 are among the most common in neuro-oncology. In addition, *NF2* mutations give rise to mesotheliomas and underlie subsets of additional tumor types. *NF2*-mutated meningiomas occur in approximately 33,000 patients per year. The large numbers of these lesions that frequently occur in NF2 patients lead to significant morbidity, including hearing, vision, and mobility impairment, and mortality.

About Recursion

Recursion is the clinical-stage biotechnology company industrializing drug discovery by decoding biology. Enabling its mission is the Recursion Operating System, a platform built across diverse technologies that continuously expands one of the world's largest proprietary biological and chemical datasets, the Recursion Data Universe. Recursion leverages sophisticated machine-learning algorithms to distill from its dataset the Recursion Map, a collection of hundreds of billions of searchable relationships across biology and chemistry unconstrained by human bias. By commanding massive experimental scale — up to millions of wet lab experiments weekly — and massive computational scale — owning and operating one of the most powerful supercomputers in the world, Recursion is uniting technology, biology and chemistry to advance the future of medicine.

The Company is headquartered in Salt Lake City, where it is a founding member of BioHive, the Utah life sciences industry collective. Recursion also has offices in Toronto, Montréal and the San Francisco Bay Area. Learn more at www.Recursion.com, or connect on Twitter and LinkedIn.

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Forward-Looking Statements

This document contains information that includes or is based upon "forward-looking statements" within the meaning of the Securities Litigation Reform Act of 1995, including, without limitation, those regarding early and late stage discovery, preclinical, and clinical programs; licenses and collaborations; prospective products and their potential future indications and market opportunities; Recursion OS and other technologies; business and financial plans and performance; and all other statements that are not historical facts. Forward-looking statements may or may not include identifying words such as "plan," "will," "expect," "anticipate," "intend," "believe," "potential," "continue," and similar terms. These statements are subject to known or unknown risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statements, including but not limited to: challenges inherent in pharmaceutical research and development, including the timing and results of preclinical and clinical programs, where the risk of failure is high and failure can occur at any stage prior to or after regulatory approval due to lack of sufficient efficacy, safety considerations, or other factors; our ability to leverage and enhance our drug discovery platform; our ability to obtain financing for development activities and other corporate purposes; the success of our collaboration activities; our ability to obtain regulatory approval of, and ultimately commercialize, drug candidates; the impact of the COVID-19 pandemic and force majeure events; our ability to obtain, maintain, and enforce intellectual property protections; cyberattacks or other disruptions to our technology systems; our ability to attract, motivate, and retain key employees and manage our growth; and other risks and uncertainties such as those described under the heading "Risk Factors" in our filings with the U.S. Securities and Exchange Commission, including our most recent Quarterly Report on Form 10-Q and our Annual Report on Form 10-K. All forward-looking statements are based on management's current estimates, projections, and assumptions, and Recursion undertakes no obligation to correct or update any such statements, whether as a result of new information, future developments, or otherwise, except to the extent required by applicable law.