

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 8, 2023

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

Delaware
(State or other jurisdiction of incorporation)

001-40323
(Commission File Number)
41 S Rio Grande Street
Salt Lake City, UT 84101
(Address of principal executive offices) (Zip code)

46-4099738
(I.R.S. Employer Identification No.)

(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, par value \$0.00001 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 or (§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 August 8, 2023, Recursion Pharmaceuticals, Inc. (the Company) issued a press release announcing its results of operations and financial condition for the second quarter June 30, 2023. A copy of the press release is furnished as Exhibit 99.1 and is incorporated herein by reference.

Item 7.01. Regulation FD Disclosure.

On August 8, 2023, the Company issued a press release announcing it has successfully predicted the protein target(s) for approximately 36 billion chemical compounds in the Enamine REAL Space chemical library. The press release is attached as Exhibit 99.2 to this Current Report on Form 8-K and incorporated into this Item 7.01 by reference.

Also on August 8, 2023, the Company released an updated investor presentation. The investor presentation will be used from time to time in meetings with investors. A copy of the presentation is attached hereto as Exhibit 99.3.

The information furnished pursuant to Item 2.02 (including Exhibit 99.1) and 7.01 (including Exhibits 99.2 and 99.3) on this Form 8-K, 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, nor shall it be deemed incorporated by reference into any other filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

Exhibit Number	Description
99.1	Press release issued by Recursion Pharmaceuticals, Inc. dated August 8, 2023
99.2	Press release issued by Recursion Pharmaceuticals, Inc. dated August 8, 2023
99.3	Investor presentation of Recursion Pharmaceuticals, Inc. dated August 8, 2023
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 on August 8, 2023.

RECURSION PHARMACEUTICALS, INC.

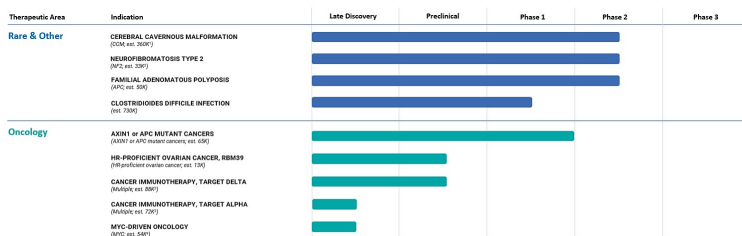
By: /s/ Michael Secora
Michael Secora
Chief Financial Officer

Recursion Provides Business Updates and Reports Second Quarter 2023 Financial Results

- Deployed new digital chemistry technology, together with NVIDIA, to predict the ligand-protein interactions for approximately 36 billion compounds in the Enamine REAL Space, reported to be the world's largest searchable chemical library
- Added, accelerated or tightened guidance for clinical study readouts or clinical starts; the first clinical readout is expected in Q3 2023
- Delivered value in our pipeline, partnerships and platform through the acquisitions of Cyclica and Valence Discovery
- Announced a \$50 million investment and partnership with NVIDIA to accelerate the construction, optimization and deployment of foundation models for biology and chemistry
- Continued advancing large-scale foundation models for drug discovery with our partners at NVIDIA

SALT LAKE CITY, August 8, 2023 — Recursion (Nasdaq: RXR), a leading clinical stage TechBio company decoding biology to industrialize drug discovery, today reported business updates and financial results for its second quarter ending June 30, 2023.

"As the world continues to undergo a revolution in artificial intelligence and computation, Recursion is leading the TechBio sector with one of the most advanced technology-enabled drug discovery platforms in the industry," said Chris Gibson, Ph.D., Co-Founder and CEO of Recursion. "Our recent acquisitions of Cyclica and Valence and our new partnership with NVIDIA bring industry-leading capabilities to our platform that have already delivered significant value across our pipeline and partnerships. With multiple clinical catalysts in the coming quarters, the extraordinary progress in our technology, and the commitment of our teams, Recursion is making its vision of industrialized drug discovery real day by day."



More than a dozen early discovery and research programs in oncology, neuroscience, inflammation & immunology, and rare disease

All populations defined above are US and EUS incidence unless otherwise noted. EUS is defined as France, Germany, Italy, Spain and UK. (1) Prevalence for hereditary and sporadic asymptomatic population. (2) Annual US and EUS incidence for all MYC-driven neoplasms. (3) Our program has the potential to address several indications in this space. (4) Our program has the potential to address several indications driven by MYC alterations, totaling 54,000 patients in the US and EUS annually. We have not finalized a target product profile for a specific indication.

Summary of Business Highlights

- Pipeline
 - **Cerebral Cavernous Malformation (CCM) (REC-994)**: Our Phase 2 SYCAMORE clinical trial is a double-blind, placebo-controlled safety, tolerability and exploratory efficacy study of this drug candidate in participants with CCM.

This study was fully enrolled as of June 2023 with 62 participants and all participants who have thus far finished their first year of treatment have enrolled in the long-term extension study. We expect to share Phase 2 proof-of-concept data in H2 2024.

- **Neurofibromatosis Type 2 (NF2) (REC-2282):** Our Phase 2/3 POPLAR clinical trial is a two part study of REC-2282 in participants with progressive NF2-mutated meningiomas. Part A of the study is ongoing and is exploring two doses of REC-2282 in approximately 23 adults and 9 adolescents. We expect to share Phase 2 safety, tolerability, pharmacokinetics and preliminary efficacy in H2 2024.
- **Familial Adenomatous Polyposis (FAP) (REC-4881):** We have enrolled multiple participants in our TUPELO clinical trial which evaluates REC-4881 in patients with FAP. We are now providing guidance on a data readout and expect to share Phase 2 safety, tolerability, pharmacokinetics and preliminary efficacy in H1 2025.
- **AXIN1 or APC Mutant Cancers (REC-4881):** We will evaluate REC-4881 in a Phase 2 biomarker enriched study in patients with unresectable, locally advanced or metastatic cancer with AXIN1 or APC mutations. The IND was accepted by the FDA and we expect to initiate this Phase 2 study in Q4 2023.
- **Clostridioides difficile Infection (REC-3964):** Our Phase 1 clinical trial is a first-in-human protocol evaluating single and multiple doses of REC-3964 in healthy volunteers and will assess the safety, tolerability and pharmacokinetic profile of REC-3964. Single ascending dose and multiple ascending dose studies are now complete. REC-3964 has been well tolerated and no safety issues have been identified to date. We expect to share Phase 1 safety and pharmacokinetics data in Q3 2023.
- **RBM39 HR-Proficient Ovarian Cancer:** RBM39 (previously identified as Target Gamma) is a novel CDK12-adjacent target identified by the Recursion OS. We believe we can modulate this target to produce a therapeutic effect in HR-proficient ovarian cancer and potentially in other tumor types. This program is in the preclinical stage and IND-enabling studies are progressing.
- **Partnerships**
 - **NVIDIA:** In July 2023, we announced a \$50 million investment and collaboration with NVIDIA. We will continue to build our own foundation models for biology and chemistry and NVIDIA will assist in optimizing these models, provide priority access to computational resources on NVIDIA's cloud service DGX Cloud, and potentially host commercially-licensable machine learning and foundation models developed by Recursion on BioNeMo, NVIDIA's marketplace for generative AI in drug discovery. In this partnership, we will maintain control of our proprietary data and models as well as how and where we could host our technology tools as we expand our business strategy of data as a value driver. Since the announcement in July, we have already deployed our digital chemistry technology together with NVIDIA's computational resources to predict the ligand-protein interactions for approximately 36 billion compounds in the Enamine REAL Space, reported to be the world's largest searchable chemical library, where we evaluated 2.8 quadrillion target-compound pairs.

- **Roche-Genentech and Bayer:** We continue to advance our collaborations to discover potential new therapeutics with our strategic partners Roche-Genentech and Bayer. In the near-term, there is the potential for option exercises associated with partnership programs or option exercises associated with map building initiatives or data sharing.
- **Platform**
 - **Digital Chemistry and Generative AI Capabilities:** In May 2023, we acquired Cyclica and Valence Discovery to bolster our digital chemistry and generative AI capabilities and drive value across our pipeline, partnerships, and platform. Shortly after closing these acquisitions, we used Cyclica's digital chemistry tools to predict the protein-ligand interactions for the over 1 million compounds in our internal, non-partnered chemical library. Now, less than one quarter after the closing of these acquisitions, we worked with our partners at NVIDIA to predict the protein-ligand interactions of approximately 36 billion compounds in the Enamine REAL Space, reported to be the world's largest searchable chemical library.
 - **Accelerating Pipeline and Partnership Value:** For our internal pipeline, we have used our digital chemistry tools to deconvolve proteome-wide biological targets to confirm that certain compounds operate through a novel mechanism of action which was previously predicted by our functional phenomics maps. Such proteomic mapping capabilities provide an additional data layer to efficiently identify the most promising novel chemical series.
 - **Foundation Model Construction:** We continue to use our supercomputer, BioHive-1, to train a proprietary phenomics foundation model. As we have trained on larger quantities of our proprietary data, emergent properties have arisen out of the models and we have seen significant improvements over previous deep learning production models. We are also in the early stages of exploring more powerful and broadly useful foundation models based on our large-scale proprietary multi-omics data, which includes phenomics across 50 human cell types and approximately 1.7 million compounds, multi-timepoint live-cell microscopy, transcriptomics, proteomics, inVivomics, multi-target compound interactions, physicochemical properties, as well as predicted protein-ligand relationships. We may explore commercial licensing of some of our models in collaboration with NVIDIA and their BioNeMo platform in the coming year, though our state-of-the-art models will only be available to our team and close partners.
 - **Large Language Models:** One year ago, more than 40 employees were dedicated to exploring our maps of biology and chemistry to initiate programs at Recursion. Today, those same employees have been redeployed and our newest internal programs are being initiated autonomously. This efficiency and scale is through the deployment of large language models to map scientific literature in conjunction with our internally derived proprietary maps to identify opportunities for scientific arbitrage in areas of unmet need. These opportunities are then automatically prioritized for confirmation and validation in our highly-automated wetlabs. This is a significant step towards our vision of autonomous drug discovery and biological exploration.
 - **Valence Labs - Powered by Recursion:** In July 2023 at the International Conference for Machine Learning, we launched Valence Labs, Recursion's cutting-edge machine learning research center for biology and chemistry in Montréal that aims to promote open-science and academic research. Recursion's

commitment to open-science helps us recruit and retain the best talent in the field of generative AI, allows us to design and set the standards by which ML and AI are deployed in drug discovery, and may drive additional biopharma companies to consider partnering with Recursion to get access to our proprietary state-of-the-art tools, technology, datasets and programs.

Additional Corporate Updates

- **Chief Medical Officer:** In May 2023, David Mauro, M.D., Ph.D. joined Recursion as its Chief Medical Officer. Dr. Mauro has over 20 years experience in oncology drug development and has guided more than 25 Investigational New Drug candidates through the translational, preliminary and later stages of development at various companies.
- **Chief Legal Officer:** In July 2023, Recursion named Nathan Hatfield, J.D., M.B.A. as Chief Legal Officer. Mr. Hatfield has worked at Recursion for over 6 years, previously serving as SVP and Head of Legal. Prior to Recursion, Mr. Hatfield was a securities attorney at the law firm Wilson Sonsini Goodrich & Rosati.
- **Toronto Office:** In June 2023, we celebrated the opening of our Canadian Headquarters in Toronto with government officials as well as members of the technology and biotechnology communities.
- **ESG Reporting:** In June 2023, Recursion received a favorable ESG Risk Rating from Morningstar Sustainalytics which ranked Recursion as the #1 biotechnology company out of approximately 400 companies and the #14 pharmaceuticals company out of approximately 900 companies.

Second Quarter 2023 Financial Results

- **Cash Position:** Cash and cash equivalents were \$405.9 million as of June 30, 2023. *This cash position does not include the recent \$50 million investment from NVIDIA.*
- **Revenue:** Total revenue was \$11.0 million for the second quarter of 2023, compared to \$7.7 million for the second quarter of 2022. The increase was due to progress made in our Roche-Genentech collaboration.
- **Research and Development Expenses:** Research and development expenses were \$55.1 million for the second quarter of 2023, compared to \$38.4 million for the second quarter of 2022. The increase in research and development expenses was due to increased platform costs as we have expanded and upgraded our capabilities.
- **General and Administrative Expenses:** General and administrative expenses were \$28.3 million for the second quarter of 2023, compared to \$21.2 million for the second quarter of 2022. The increase in general and administrative expenses was due to an increase in salaries and wages of \$3.0 million and increases in software and depreciation expense.
- **Net Loss:** Net loss was \$76.7 million for the second quarter of 2023, compared to a net loss of \$65.6 million for the second quarter of 2022.

About Recursion

Recursion is a clinical stage TechBio company leading the space by decoding biology to industrialize drug discovery. Enabling its mission is the Recursion OS, a platform built across diverse technologies that continuously expands one of the world's largest proprietary biological and chemical datasets. Recursion leverages sophisticated machine-learning algorithms to distill from its dataset a collection of trillions 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.

Recursion 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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Investor Contact

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Recursion Pharmaceuticals, Inc.
Condensed Consolidated Statements of Operations (unaudited)
(in thousands, except share and per share amounts)

	Three months ended June 30,		Six months ended June 30,	
	2023	2022	2023	2022
Revenue				
Operating revenue	\$ 11,016	\$ 7,653	\$ 23,150	\$ 12,952
Grant revenue	1	21	1	55
Total revenue	11,017	7,674	23,151	13,007
Operating costs and expenses				
Cost of revenue	9,382	14,227	21,829	22,026
Research and development	55,060	38,439	101,737	70,880
General and administrative	28,290	21,199	51,165	42,273
Total operating costs and expenses	92,732	73,865	174,731	135,179
Loss from operations	(81,715)	(66,191)	(151,580)	(122,172)
Other income, net	4,989	631	9,527	633
Net loss	\$ (76,726)	\$ (65,560)	\$ (142,053)	\$ (121,539)
Per share data				
Net loss per share of Class A, B and Exchangeable common stock, basic and diluted	\$ (0.38)	\$ (0.38)	\$ (0.71)	\$ (0.71)
Weighted-average shares (Class A, B and Exchangeable) outstanding, basic and diluted	201,415,475	172,212,390	198,957,804	171,455,595

Recursion Pharmaceuticals, Inc.
Condensed Consolidated Balance Sheets (unaudited)
(in thousands)

	June 30, 2023	December 31, 2022
Assets		
Current assets		
Cash and cash equivalents	\$ 405,870	\$ 549,912
Restricted cash	3,325	1,280
Other receivables	3,051	2,753
Other current assets	18,774	15,869
Total current assets	431,020	569,814
Restricted cash, non-current	7,629	7,920
Property and equipment, net	89,768	88,192
Operating lease right-of-use assets	34,899	33,255
Intangible assets, net	42,757	1,306
Goodwill	60,516	801
Other assets, non-current	110	—
Total assets	\$ 666,699	\$ 701,288
Liabilities and stockholders' equity		
Current liabilities		
Accounts payable	\$ 2,086	\$ 4,586
Accrued expenses and other liabilities	32,873	32,904
Unearned revenue	73,105	56,726
Notes payable	676	97
Operating lease liabilities	5,219	5,952
Total current liabilities	113,959	100,265
Unearned revenue, non-current	32,436	70,261
Notes payable, non-current	1,155	536
Operating lease liabilities, non-current	45,850	44,420
Deferred tax liabilities	4,336	—
Total liabilities	197,736	215,482
Commitments and contingencies		
Stockholders' equity		
Common stock (Class A, B and Exchangeable)	2	2
Additional paid-in capital	1,250,570	1,125,360
Accumulated deficit	(781,609)	(639,556)
Total stockholders' equity	468,963	485,806
Total liabilities and stockholders' equity	\$ 666,699	\$ 701,288

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 the outcomes and benefits expected from the NVIDIA partnership and Cyclica and Valence Discovery acquisitions and the launch of Valence Labs; early and late stage discovery, preclinical, and clinical programs, including timelines for data readouts; licenses and collaborations, including option exercises by partners and additional partnerships; prospective products and their potential future indications and market opportunities; Recursion OS and other technologies; business and financial plans and performance, including cash runway; 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," "could," "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; 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; inflation and other macroeconomic issues; 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.

Recursion Bridges the Protein and Chemical Space with Massive Protein-Ligand Interaction Predictions Spanning 36 Billion Compounds

- Recursion has predicted the protein target(s) for approximately 36 billion chemical compounds in the Enamine REAL Space, reported to be the world's largest searchable chemical library
- These advances were made possible by NVIDIA DGX Cloud supercomputing and the recent acquisition of Cyclica's MatchMaker technology

SALT LAKE CITY, August 8, 2023 — Recursion (NASDAQ: RXX), a leading clinical stage TechBio company decoding biology to industrialize drug discovery, today announced it has successfully screened the Enamine REAL Space chemical library using its MatchMaker technology, recently acquired from Cyclica, to predict the protein target(s) for approximately 36 billion chemical compounds. This accomplishment was made possible by several other enabling discoveries, including the predicted structures derived from the AlphaFold2 database for more than 15,000 human proteins containing more than 80,000 potential binding pockets, as well as the Enamine REAL Space, which is reported to be the world's largest searchable chemical library comprised of approximately 36 billion make-on-demand molecules. In total, this screen digitally evaluated **more than 2.8 quadrillion** small molecule-target pairs.

"This achievement represents a significant and exciting step toward achieving our mission of decoding biology and chemistry," said Chris Gibson, Ph.D., Co-Founder and CEO of Recursion. "Until this point, the groundbreaking progress across biology and chemistry that enabled this moment – namely, AlphaFold, the Enamine virtual chemical library and the rapid advancement of large-scale compute and new machine learning approaches – have largely lived in isolation of one another or have been bridged at relatively small scales. Leveraging Recursion's machine learning and computational expertise and NVIDIA's technology, we have layered these advances together to predict how each of the molecules in this vast chemical universe may interact with the protein universe."

The company generated this massive new data layer of predicted interactions in less than 90 days after closing the acquisition of Cyclica and in under 30 days since initiating the collaboration with NVIDIA.

MatchMaker uses machine learning to assess whether a small molecule is compatible with a specific protein binding pocket, providing a solution that is significantly less computationally intensive and much more scalable than traditional docking and physics-based interaction simulations. Similar to Recursion's phenomics platform, the scalability of MatchMaker enables a "high-dimensional" view of biochemistry: activity is predicted not just for a single target, but for many at the same time. This enables three core advantages: First, this predicted data layer can be used to determine which wet-lab experiments should be executed to advance programs faster across a wide range of targets and chemical space. Second, this predicted data layer can be used as part of Recursion's multi-modal dataset to better understand biological activity across programs quickly and at scale. Finally, this approach can pre-screen for more computationally expensive precision modeling techniques implemented by Recursion's computational and digital chemistry teams, to more efficiently advance programs.

"We are excited to collaborate with Recursion to explore the chemical space and support our mission to accelerate drug discovery," said Andrey Tolmachev, Ph.D., Founder and Owner of

Enamine. He continued: "This achievement in the 36 Billion REAL Space is just a start of our journey. The chemical knowledge accumulated at Enamine over its 35-years history allows us to explore trillions of relationships without compromising the high success rate of synthesis. We believe the predictions made by Recursion can help us prioritize parts of the chemical universe and provide an opportunity to develop focused chemical spaces and novel compounds around discovered hits quickly."

Much of the initial testing and infrastructure development for the project was completed using BioHive-1, Recursion's in-house supercomputer, an NVIDIA DGX SuperPOD, which is ranked among the top 125 most powerful supercomputers in the world across any industry by TOP500 as of June 2023. The final analysis was made possible by NVIDIA's DGX Cloud, an advanced AI-training-as-a-service solution to which Recursion gained access following its recently announced collaboration with NVIDIA. Recursion worked with urgency to make this effort happen in a short period of time.

"Bringing together powerful data, AI and data-center scale compute, Recursion's MatchMaker running on NVIDIA DGX Cloud essentially created a time machine for the company's drug discovery program and sets a new bar for the industry," said Kimberly Powell, Vice President of Healthcare at NVIDIA. "Within one week, the Recursion team was able to achieve what would have otherwise taken 100,000 years to compute with physics-based methods — setting the stage for a wet-lab, dry-lab flywheel to better predict drug-target interactions and increase a drug's probability of success in the clinic."

Recursion plans to leverage this new database of predictions to industrialize its chemistry operations across its pipeline and in service to its partners, enabling significantly greater efficiency in its medicinal chemistry cycles. Further, Recursion plans to continue improving and expanding the number and type of chemical properties and interactions it can predict using in-house tools, tools acquired through the acquisition of Cyclica, and tools being developed by Valence Labs, the semi-autonomous research hub powered by Recursion and formed through the acquisition of Valence Discovery.

About Recursion

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About Enamine

Headquartered in Kyiv, Ukraine, Enamine combines a CRO profile with the production and multilevel supply of innovative screening libraries, novel building blocks, fragments, and various

functional compounds, including covalent and protein degradation compounds. The company provides integrated support in early drug discovery, including biological screening, hit-to-lead and lead optimization projects. The major assets of the company are the collection of 4 million screening compounds backed up by 36 billion REAL Compounds for hit follow-up, and the dynamically growing catalog of over 300,000 building blocks. Enamine offers collaborative expertise to exclusively design and screen libraries of novel small molecular weight compounds and fragments.

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Investor Contact

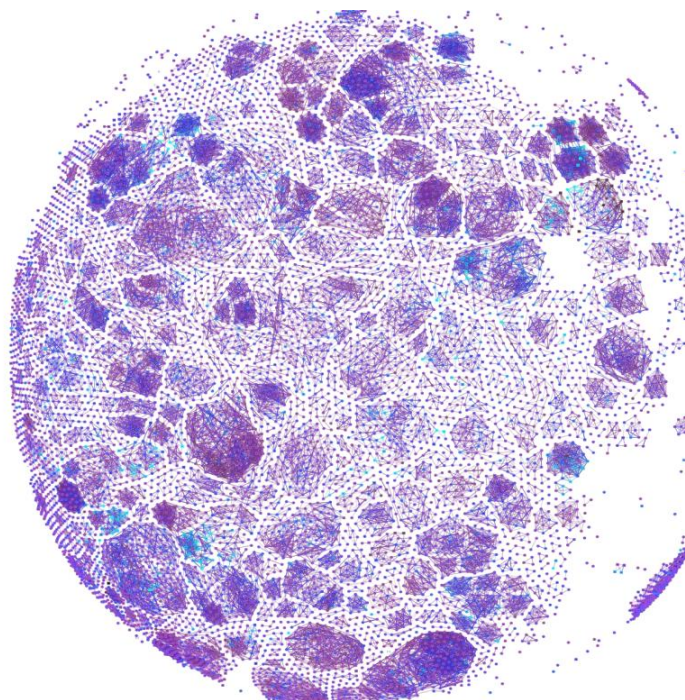
Investor@Recursion.com

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 the outcomes and benefits expected from the NVIDIA partnership and Cyclica and Valence Discovery acquisitions and the launch of Valence Labs; early and late stage discovery, preclinical, and clinical programs; licenses and collaborations; prospective products and their potential future indications and market opportunities; the Recursion OS and other technologies, including MatchMaker, the Enamine REAL Space chemical library and NVIDIA's DGX Cloud; 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; 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.

Decoding Biology To Radically Improve Lives

End of Q2, 2023



Disclaimers

This presentation and any accompanying discussion and documents contain information that includes or is based upon "forward-looking statements" within the meaning of the Securities Litigation Reform Act of 1995. These forward-looking statements are based on our current expectations, estimates and projections about our industry and our company, management's beliefs and certain assumptions we have made. The words "plan," "anticipate," "believe," "continue," "estimate," "expect," "intend," "may," "will" and similar expressions are intended to identify forward-looking statements. Forward-looking statements made in this presentation include outcomes and benefits expected from the NVIDIA partnership and Cyclica and Valence Discovery acquisitions and the launch of Valence Labs, outcomes and benefits from licenses and collaborations, including option exercises by partners and additional partnerships; the occurrence or realization of any near or medium term potential milestones, the initiation, timing, progress, results, and cost of our research and development programs and our current and future preclinical and clinical studies, including timelines for data readouts, the potential size of the market opportunity for our drug candidates, our ability to identify viable new drug candidates for clinical development and the accelerating rate at which we expect to identify such candidates, our expectation that the assets that will drive the most value for us are those that we will identify in the future using our datasets and tools, and many others. Forward-looking statements made in this presentation are neither historical facts nor assurances of future performance, are subject to significant risks and uncertainties, and may not occur as actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. For a discussion of factors that could affect our business, please refer to the "Risk Factors" sections in our filings with the U.S. Securities and Exchange Commission, including our most recent Quarterly Report on Form 10-Q. This presentation does not purport to contain all the information that may be required to make a full analysis of the subject matter. We undertake no obligation to correct or update any forward-looking statements, whether as a result of new information, future events or otherwise.

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Maturing the TechBio value proposition – Q2, 2023

Pipeline - Added, accelerated or tightened guidance for clinical studies:

- **REC-3964 Ph1 C Diff** safety in **Q3, 2023**
- **REC-994 Ph2 CCM** top-line in **H2, 2024**
- **REC-2282 Ph2 NF2** safety & preliminary efficacy in **H2, 2024**
- **REC-4881 Ph2 FAP** safety & preliminary efficacy in **H1, 2025**
- **IND accepted for AXIN1 or APC mutant cancers** with **Ph2 initiation in Q4, 2023**

Partnerships - Sector-leading partnerships across biopharma and tech:

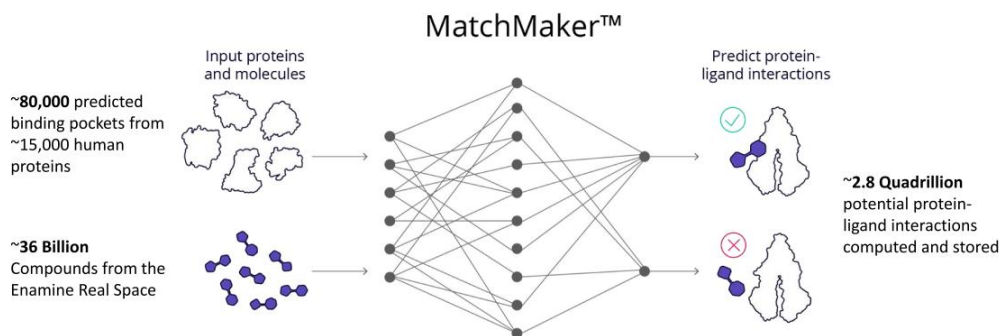
- Announced a \$50 million **investment and partnership** with **NVIDIA** to accelerate the construction, optimization and deployment of foundation models for biology and chemistry
- Advancing collaborations with **Roche-Genentech** and **Bayer**: \$13B in potential milestones across 50+ possible programs plus royalties

Platform - Continued building on the strength of our Recursion OS:



- **Predicted ligand-protein interactions for ~36 billion compounds** in **Enamine REAL Space** (reported to be the world's largest searchable chemical library) **working with partners at NVIDIA**
- New pipeline programs now exclusively generated via Large Language Model (LLM) workflow
- Developing large-scale foundation models for drug discovery, based upon our massive proprietary dataset spanning biology and chemistry



Quick Update: Bridging Protein and Chemical Space with Massive Protein-Ligand Interaction Predictions



Computation at Scale

Recursion partnered with  NVIDIA to integrate and optimize MatchMaker (acquired via ) for massive scale GPU-based computation on BioHive-1 and the DGXCloud

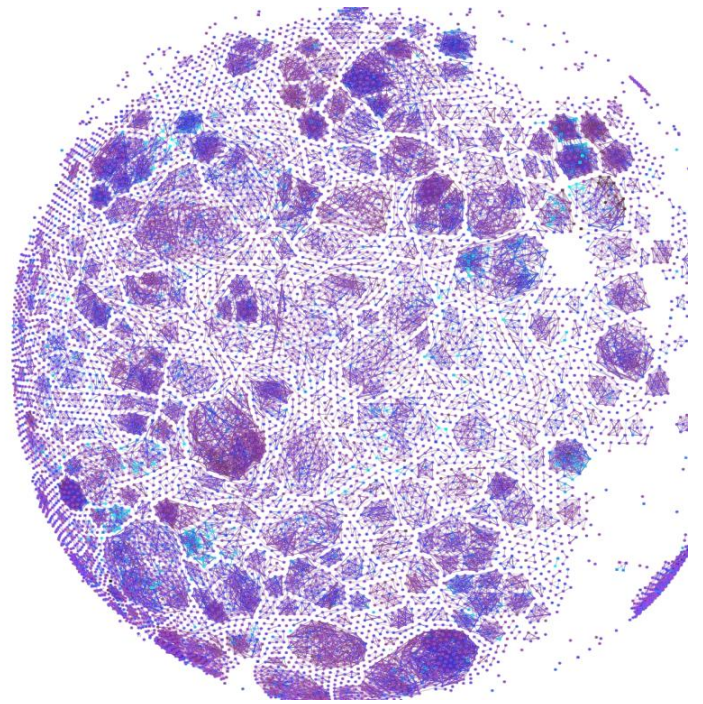
Computation at Speed

This tool was deployed to predict protein-ligand interaction for ~36 Billion compounds from the Enamine Real Space, less than 90 days post-acquisition of Cyclica and less than 30 days post-partnership with NVIDIA

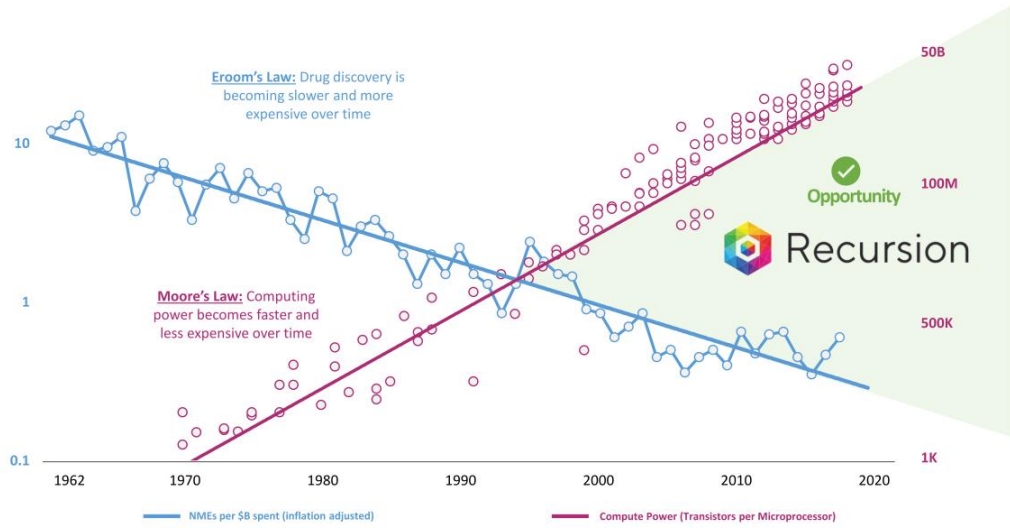
Computation as a Data-Layer

Recursion will use the predicted interactions as a data-layer in its multi-omic dataset for honing mechanistic predictions from its wet-labs and for accelerating SAR cycles through better predictions for its internal pipeline and within its partnerships

In Brief: The Recursion Value Proposition

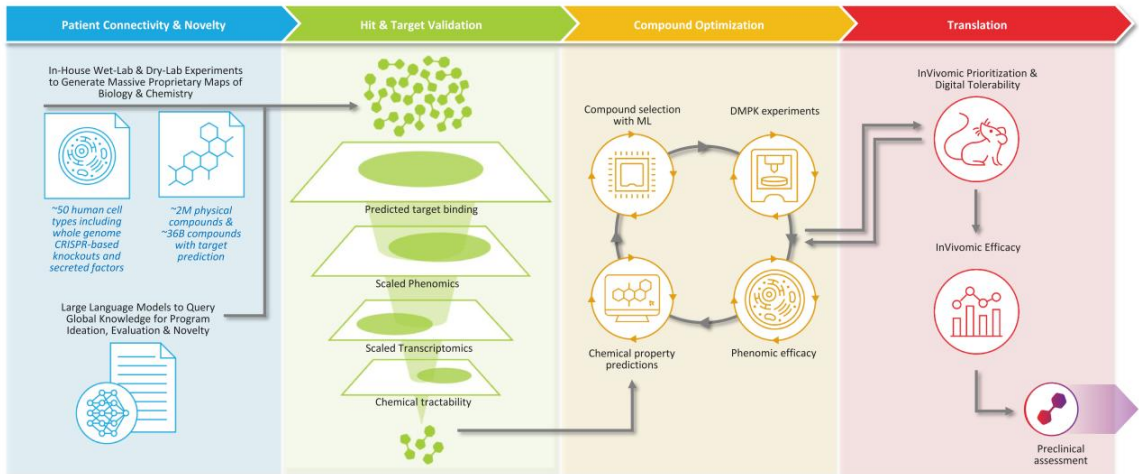


Recursion leading a new TechBio sector at the intersection of technology and biology

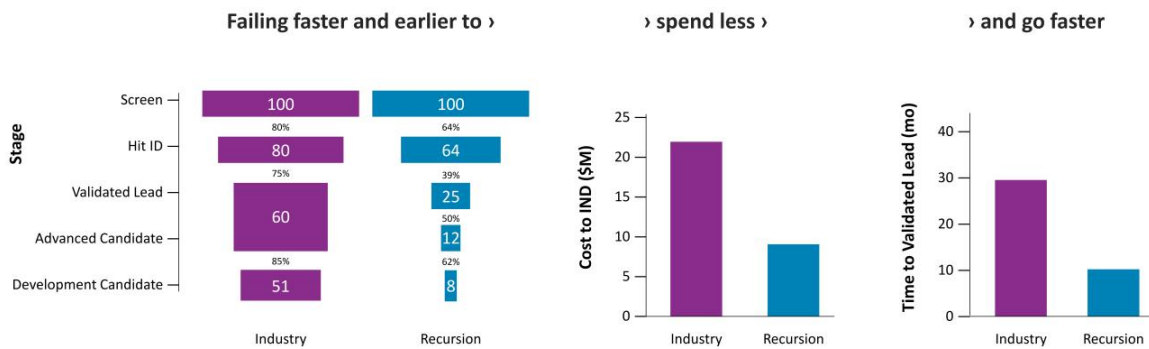


Adapted from Scannell, J et al (2012). Diagnosing the decline in pharmaceutical R&D efficiency. *Nat Rev Drug Discov*, 11, 191-200.

The Recursion OS today: Industrializing drug discovery to transform BioTech into TechBio

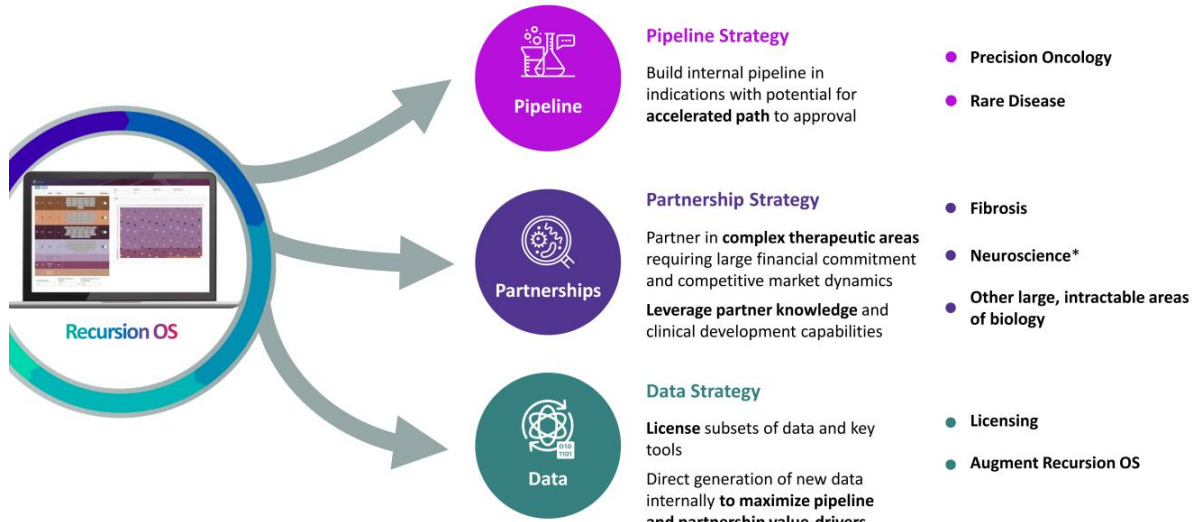


Mapping and navigating the complex systems of biology and chemistry has demonstrated leading indicators of efficiency



Data shown is the average of all our programs since late 2017 through 2022. All industry data adapted from Paul, et al. Nature Reviews Drug Discovery. (2019) 9, 203–214

Harnessing value with a multi-pronged capital-efficient business strategy



*Includes a single oncology indication from our Roche and Genentech collaboration.

Our pipeline reflects the scale and breadth of our approach



More than a dozen additional early discovery and research programs in oncology or with our partners

All populations defined above are US and EUS incidence unless otherwise noted. EUS is defined as France, Germany, Italy, Spain and UK. (1) Prevalence for hereditary and sporadic symptomatic population. (2) Annual US and EUS incidence for all NF2-driven meningiomas. (3) Our program has the potential to address several indications in this space. (4) Our program has the potential to address several indications driven by MYC alterations, totaling 54,000 patients in the US and EUS annually. We have not finalized a target product profile for a specific indication.

Our existing partnerships represent some of the most significant scientific collaborations in TechBio across biopharma and tech



(Announced Sep 2020; Expanded Dec 2021)

Fibrosis

- **\$30M upfront and \$50M equity investment**
- Up to or exceeding **\$1.2B in milestones** for up to or exceeding 12 programs
- **Mid single-digit royalties** on net sales
- Recursion owns all **algorithmic improvements**

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Genentech

A Member of the Roche Group

(Announced Dec 2021)

Neuroscience
*and a single oncology indication

- **\$150M upfront** and up to or exceeding **\$500M in research milestones and data usage options**
- Up to or exceeding **\$300M in possible milestones per program** for up to **40 programs**
- **Mid to high single-digit tiered royalties** on net sales
- Recursion owns or **co-owns all algorithmic improvements**



(Announced July 2023)

Computation and ML/AI

- **\$50M equity investment**
- Partnership on **advanced computation** (e.g. foundation model development)
- **Priority access** to compute hardware or **DGXCloud Resources**
- **Potential to house Recursion Tools on NVIDIA's BioNeMo Marketplace**

Relatable and scalable data is a key Recursion differentiator

Recursion Data Universe: >25 PB of proprietary biological and chemical data, spanning phenomics, transcriptomics, invivomics, and more

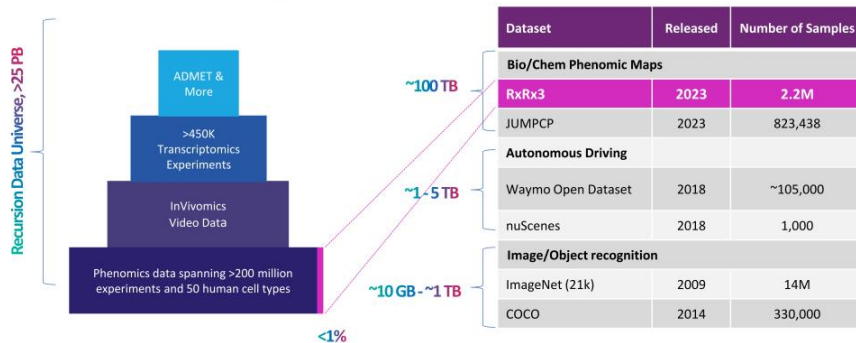
- We believe this is one of the largest such datasets **fit for the purpose of training large-scale ML models in biology**

RXR3: CRISPR knockouts of most of the human genome, 1,600 FDA approved / commercially available bioactive compounds

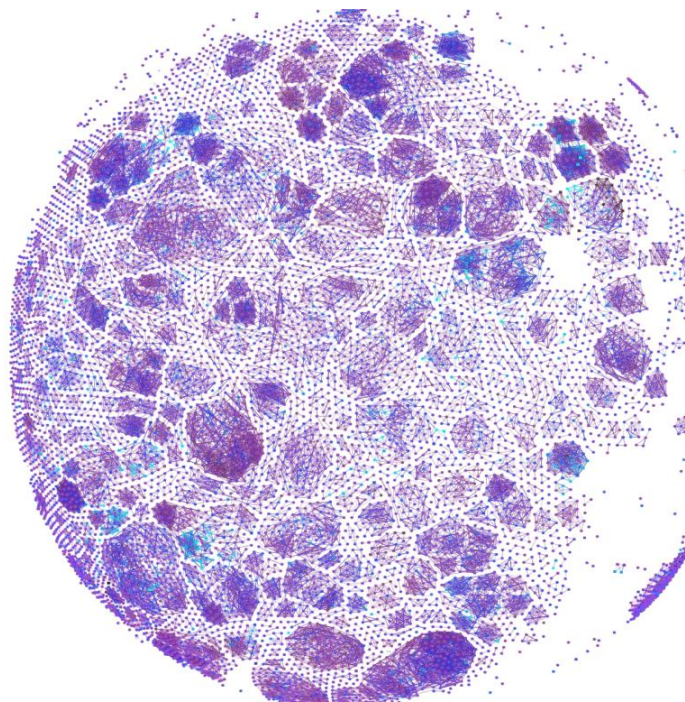
- We believe the **largest public dataset of its kind**, <1% of Recursion Data Universe, what Recursion can generate in ~1 week

MolRec™: freemium web-based **application to explore compound and gene relationships** in RXR3











Start working with RXR3 and MolRec™: www.rxr3.ai



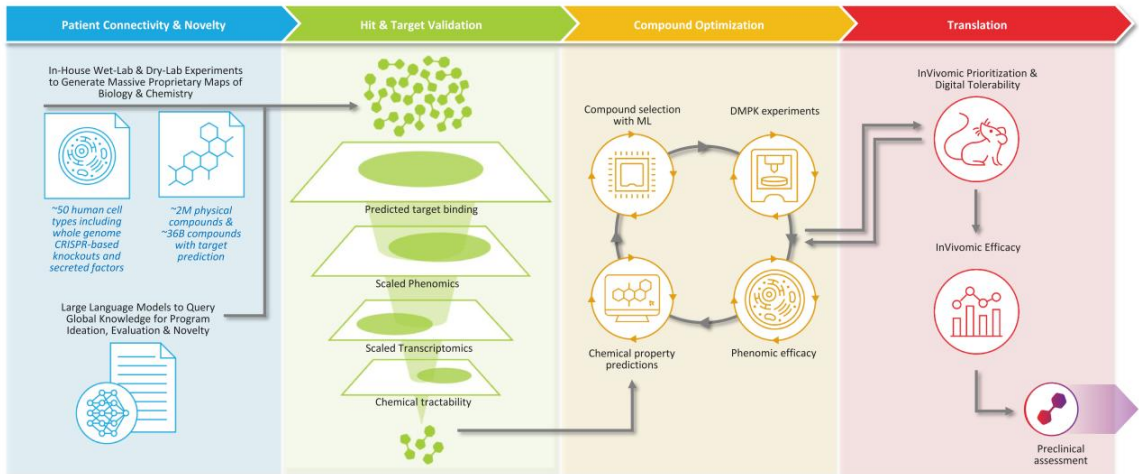
**How we build maps
of biology and
chemistry to turn
drug discovery into
a search problem**



Recursion's map-based approach is designed to set the standard for drug discovery in the 21st century

Traditional Drug Discovery		Recursion Approach
 <p>Literature drives discovery. <i>Informs target-based hypotheses</i></p>	vs	 <p>Platforms drive discovery. <i>Unbiased & target agnostic</i></p>
 <p>Data are an exhaust. <i>Limited to testing hypotheses</i></p>	vs	 <p>Data are our fuel. <i>Shape our hypotheses</i></p>
 <p>Disparate data generation. <i>Siloed to individual programs and diseases</i></p>	vs	 <p>Connected data across programs. <i>Relatable high-dimensional data</i></p>
 <p>Linear process. <i>Little cross-program learning or iteration</i></p>	vs	 <p>Virtuous cycles of atoms & bits. <i>Iterative feedback accelerates learning</i></p>
 <p>Bespoke processes. <i>Low-dimensional assays & biomarkers</i></p>	vs	 <p>Industrialized to scale. <i>Automation & standardization</i></p>

The Recursion OS today: Industrializing drug discovery to transform BioTech into TechBio



Our maps encode over 3 trillion relationships & LLMs allow us to quickly distill the most promising novel ideas from this massive search space

Patient Connectivity & Novelty → **Target Identification** → **Compound Optimization** → **Translation**

Experiments predict Maps of Biology & Chemistry

~50 human cell types including whole genome CRISPR-based knockouts and secreted factors

~2M physical compounds & ~36B compounds with target prediction

State-of-the-art Large Language Models

Rapidly scaling to 1000s of new differentiated program ideas

LLMs evaluate complex opportunities at scale

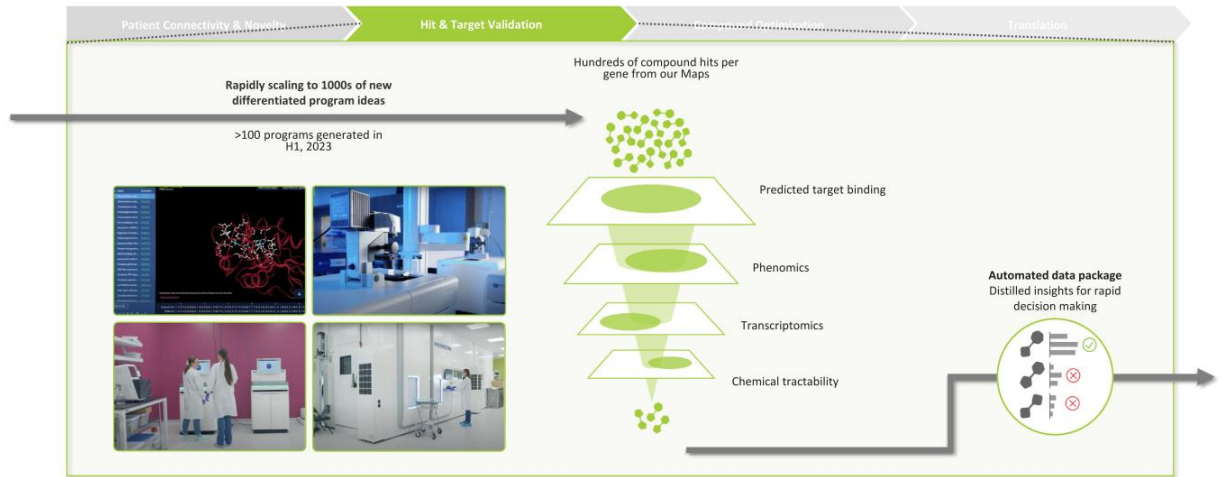
Differentiation & Impact
 Novel map insights and rapid disease research
 e.g. Uncover which of our 300M+ gene-gene relationships are unique to our Maps

Automation & Scale
 High-throughput LLMs reduce manual research load & human bias
 e.g. Our 250,000 tokens/min LLM capacity

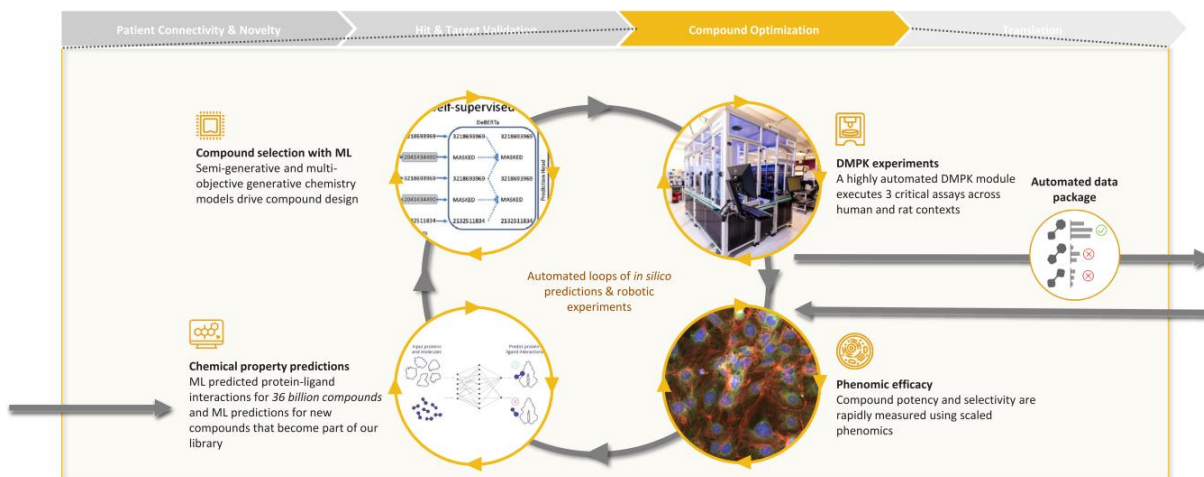
Model	Accuracy	
	Correct	Incorrect
GPT-NeoX	47%	53%
Dolly2.0	49%	51%
GPT4.0 on Azure	80%	20%
LLaMA 2	Under evaluation	

BioHive-1 is a global TOP500 supercomputer

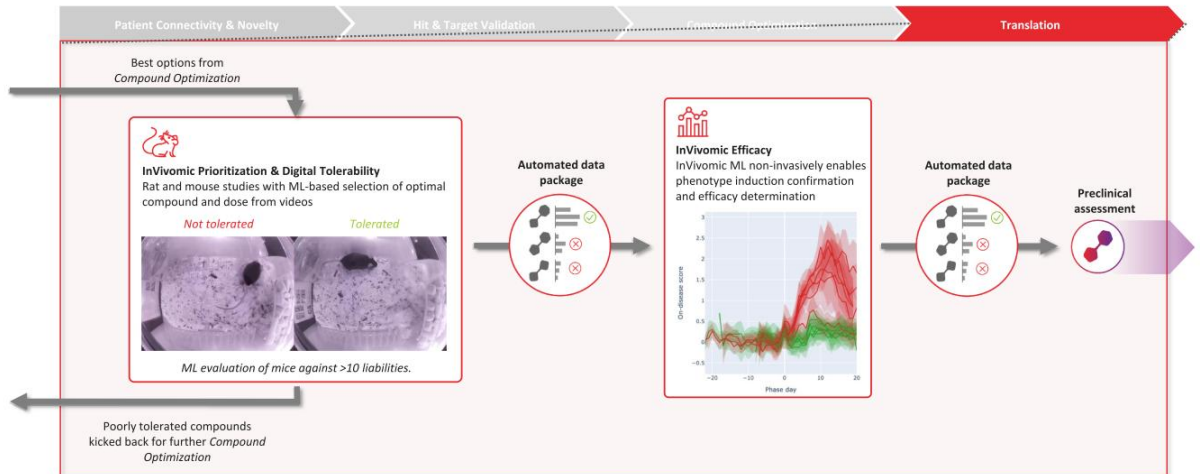
Automatic validation of map insights: we rapidly confirm novel predictions from our maps with automated, standardized, scaled -omics



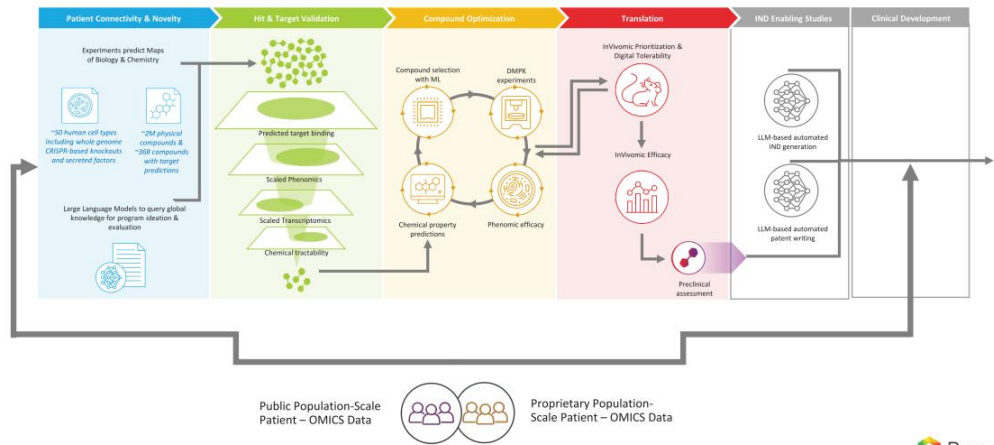
Loops of experimental data & ML predictions rapidly accelerate hit to lead and lead optimization



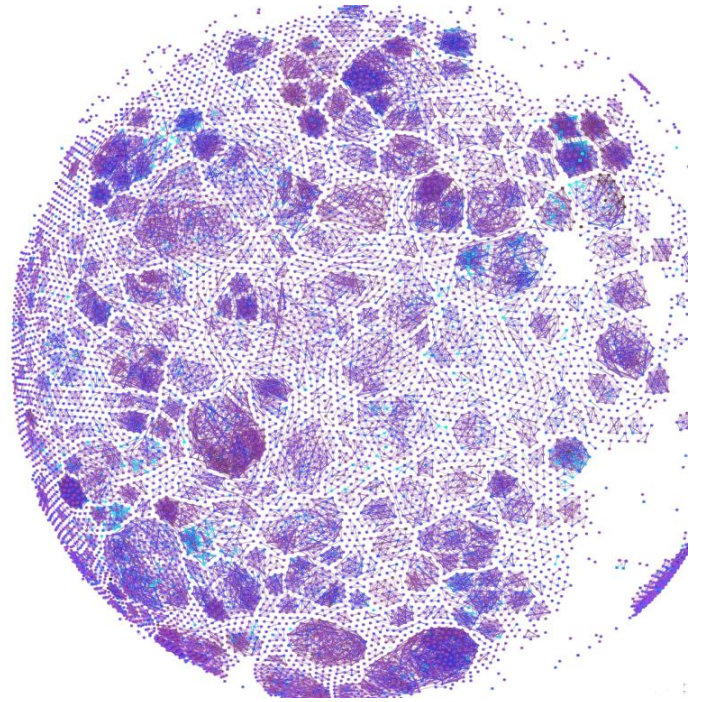
InVivomics improves whole organism understanding to rapidly translate programs towards the clinic



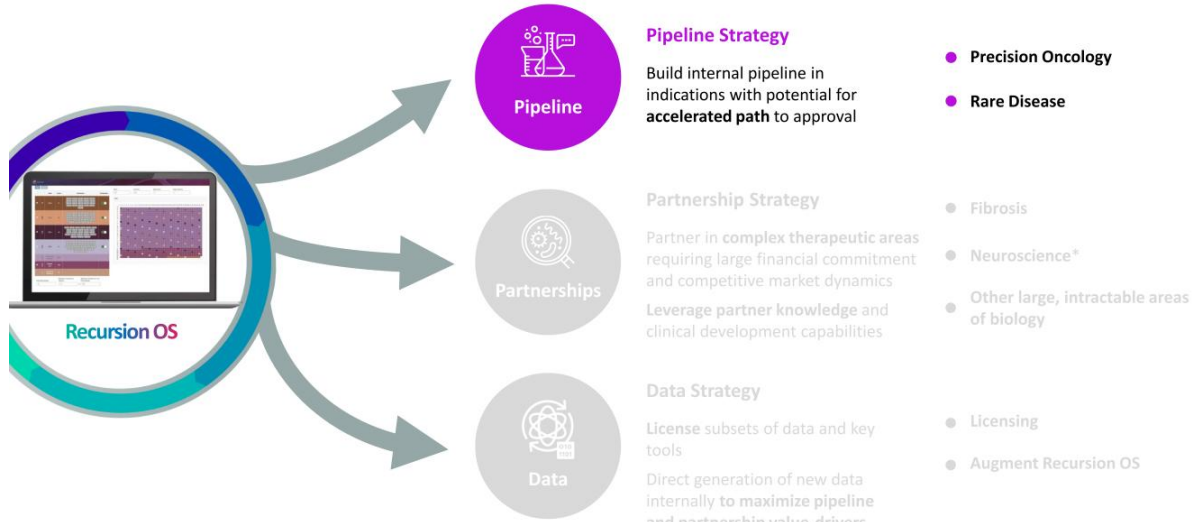
Roadmap: Addition of population-scale data will enable rapid, precise, automated program progression into clinical development at scale



**How we create
value using our
maps of biology
and chemistry**



Harnessing value with a multi-pronged capital-efficient business strategy



*Includes a single oncology indication from our Roche and Genentech collaboration.

Our pipeline reflects the scale and breadth of our approach



More than a dozen additional early discovery and research programs in oncology or with our partners

All populations defined above are US and EUS incidence unless otherwise noted. EUS is defined as France, Germany, Italy, Spain and UK. (1) Prevalence for hereditary and sporadic symptomatic population. (2) Annual US and EUS incidence for all NF2-driven meningiomas. (3) Our program has the potential to address several indications in this space. (4) Our program has the potential to address several indications driven by MYC alterations, totaling 54,000 patients in the US and EUS annually. We have not finalized a target product profile for a specific indication.

REC-994 for the Treatment of Symptomatic Cerebral Cavernous Malformations (CCM)

Target / MOA	Superoxide Scavenger
Molecule Type	Small Molecule
Lead Indication(s)	Cerebral Cavernous Malformations
Status	Phase 2
Designation(s)	US & EU Orphan Drug
Source of Insight	Recursion OS



Clinical: CCM

SYCAMORE Clinical Trial : REC-994 for CCM Phase 2 Fully Enrolled

PREVALENCE & STANDARD OF CARE

~360,000

Symptomatic US + EUS, >1 million patients worldwide live with these lesions today

>5x larger US patient population than other rare diseases like Cystic Fibrosis (>31k patients)

No approved therapy

- Most patients receive no treatment or only symptomatic therapy
- Surgical resection or stereotactic radiosurgery not always feasible because of location and is not curative

CAUSE

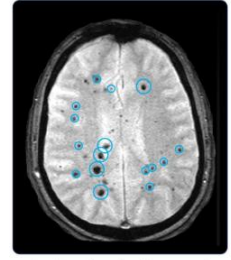
LOF mutations in genes *CCM1*, *CCM2* & *CCM3*, key for maintaining the structural integrity of the vasculature due to unknown mechanisms

PATHOPHYSIOLOGY & REASON TO BELIEVE

Vascular malformations of the CNS leading to focal neurological deficits, hemorrhage and other symptoms



Efficacy in Recursion OS as well as functional validation via scavenging of massive superoxide accumulation in cellular models; reduction in lesion number with chronic administration in mice



Vascular malformations (cavernomas)



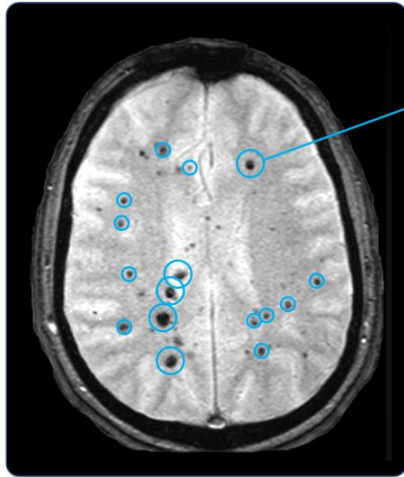
Julia – living with CCM

KEY ELEMENTS

- Targeting **sporadic and familial symptomatic CCM** patients with *CCM1*, *CCM2*, and *CCM3* mutations
- Superoxide scavenger, small molecule
- Phase 2 trial initiated in Q1 2022
- US & EU **Orphan Drug Designation**
- Oral dosing

Clinical: CCM

Disease Overview : Cerebral Cavernous Malformations (CCM)



Description

- Large unmet need for a novel nonsurgical treatment
- Vascular malformations (cavernomas) in the brain and spinal cord
- High-risk for hemorrhage creates "ticking time bomb"
- Progressive increase in CCM size and number over time in those with familial disease
- Debilitating symptoms, including intractable seizure, intracerebral hemorrhage, focal neurological deficits

"Historically, cavernomas have been managed primarily with observation, surgical resection, and occasionally radiotherapy. However, for a number of reasons, many patients with cavernomas must endure a life with neurologic symptoms"

- Ryan Kellogg, MD, Investigator at the University of Virginia

Clinical: CCM

Disease Overview : Cerebral Cavernous Malformations (CCM)



Julia – living with CCM

Patient Population – Large and Diagnosable

- **>1 million patients** worldwide live with these lesions today
- Caused by loss of function mutation in one of three genes: *CCM1* (60%), *CCM2* (20%), and *CCM3* (20%)
- Inherited autosomal dominant mutation in 30-40%; or sporadic
- US symptomatic population is more than 5 times larger than other rare diseases like **Cystic Fibrosis** (>31k patients) and **Spinal Muscular Atrophy** (>33k patients)

No Approved Medical Therapy

- **No approved drugs** for CCM
- Most patients receive **no treatment** or only **symptomatic therapy**
- Surgical resection or stereotactic radiosurgery not always feasible because of location of lesion and is not curative

~360,000

Symptomatic US + EU5 patients

Sources: Angioma Alliance / Flemming KD, et al. Population-Based Prevalence of Cerebral Cavernous Malformations in Older Adults. *Mayo Clinic Study of Aging, JAMA Neurol.* 2017 Jul 1;74(7):801-805. doi: 10.1001/jamaneurol.2017.0439. PMID: 28492932; PMCID: PMC5647645 ; Spiegler S, et al Cerebral Cavernous Malformations: An Update on Prevalence, Molecular Genetic Analyses, and Genetic Counselling. *Mol Syndromol.* 2018 Feb;9(2):60-69. doi: 10.1159/000486292. Epub 2018 Jan 25. PMID: 29593473; PMCID: PMC5836221.

Clinical: CCM

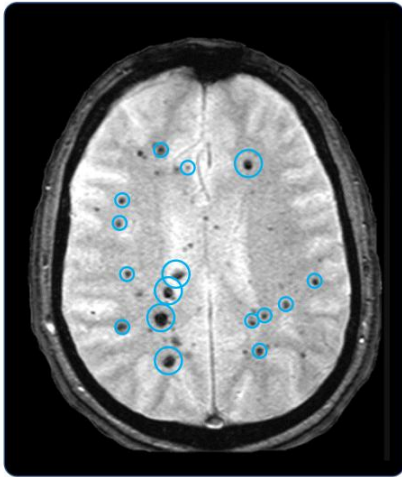
Disease Overview : CCM is an Under-Appreciated Orphan Disease

Non-oncology Orphan Indication	Product	U.S. + EU5 Prevalence
Cerebral cavernous malformation (CCM)	REC-994 (Recursion)	>1,800,000 (Symptomatic: ~360,000)
Idiopathic pulmonary fibrosis (IPF)	Esbriet (pirfenidone)	>160,000
Cystic fibrosis (CF)	VX-669/ VX-445 + Tezacaftor + Ivacaftor - Vertex	>55,000
Spinal muscular atrophy (SMA)	SPINRAZA (nusinersen)	>65,000

Sources: Angioma Alliance ; Flemming KD, et al. Population-Based Prevalence of Cerebral Cavernous Malformations in Older Adults: Mayo Clinic Study of Aging. *JAMA Neurol.* 2017 Jul 1;74(7):801-805. doi: 10.1001/jamaneurol.2017.0439. PMID: 28492932; PMCID: PMC5647645 ; Spiegel S, et al Cerebral Cavernous Malformations: An Update on Prevalence, Molecular Genetic Analyses, and Genetic Counselling. *Mol Syndromol.* 2018 Feb;9(2):60-69. doi: 10.1159/000486292. Epub 2018 Jan 25. PMID: 29593473; PMCID: PMC5836221; Maher T, et al Global incidence and prevalence of idiopathic pulmonary fibrosis. *Respir Res.* 2021 Jul 7;22(1):97. Doi: 10.1186/s12931-021-01791-z. PMID: 34238665. DRG 2022 Solutions, Report: Epidemiology, Cystic Fibrosis. CDC: SMA

Clinical: CCM

Therapeutic Approach to Cerebral Cavernous Malformations (CCM)

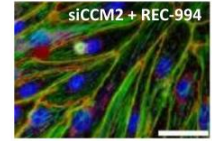
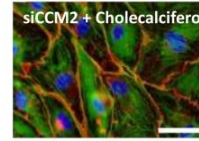
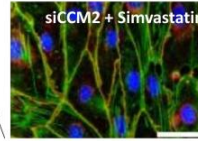
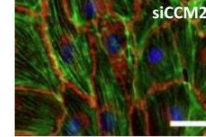
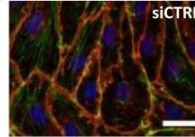
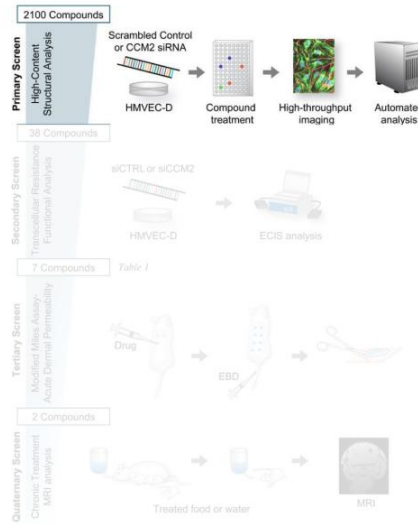


Novel therapeutic approach

- Symptoms associated with both increased size of lesions, but also inflammation or activation of lesions within the immunoprivileged environment of the brain
- Lesions arise from the capillary bed and are not high-pressure (e.g., the lesion growth is unlikely to be primarily driven by the *law of Laplace*)
- *The Recursion Vascular Stability Hypothesis:*
 - Eliminating the lesions may not be required for significant patient benefit
 - Slowing or halting the growth of the lesions while mitigating lesion leakiness and endothelial cell activation to halt the feed-forward inflammatory reaction *may* mitigate some symptoms and be beneficial to patients

Clinical: CCM

CCM – Applied prototyping of the Recursion OS



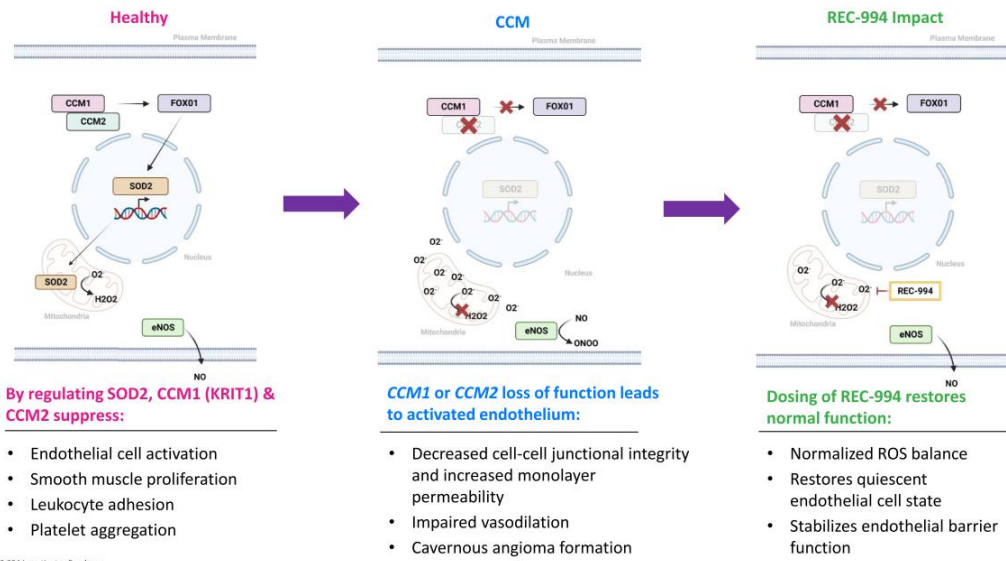
Using an early version of our Recursion OS in an academic setting, we identified about 39 molecules out of 2,100 screened that according to a machine learning classifier rescued a complex unbiased phenotype associated with CCM2 loss of function.

Through a set of follow-on confirmatory assays of increasing complexity, REC-994 stood out as one of two compounds we tested in a 5-month chronic CCM animal model where both compounds demonstrated significant benefit.

Gibson, et al. Strategy for identifying repurposed drugs for the treatment of cerebral cavernous malformation. *Circulation*, 2015

Clinical: CCM

REC-994 – Mechanism of Action

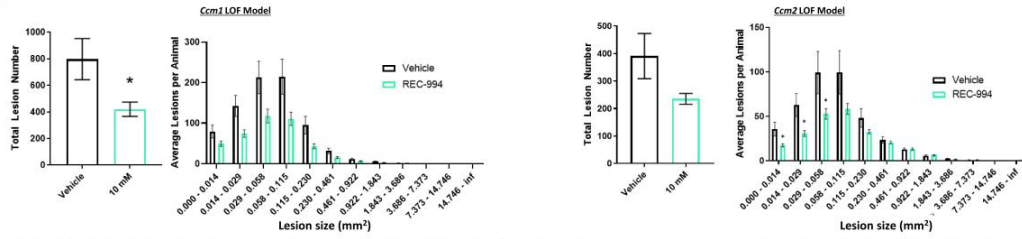


Clinical: CCM

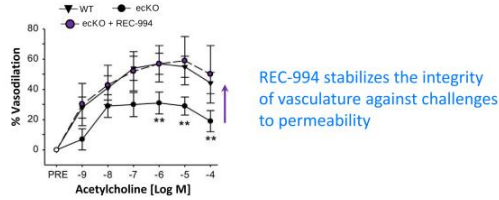
Further Confidence : Preclinical Studies Confirm Insight

Preclinical Studies: REC-994 reduces lesion burden and ameliorates vascular defects in genetic mouse models of CCM

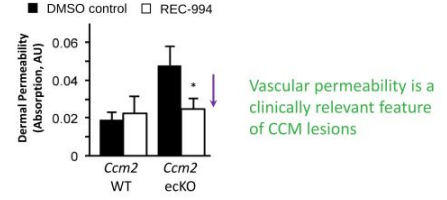
1 Reduces lesion number and size in *Ccm1* and *Ccm2* LOF mouse models



2 Completely rescues acetylcholine-induced vasodilation defect



3 Rescues dermal permeability defect in CCM2 mice



Source: Data above from Gibson, et al. Strategy for identifying repurposed drugs for the treatment of cerebral cavernous malformation. Circulation, 2015 or Recursion internal data (Ccm1 mouse model)

Clinical: CCM

Further Confidence : Clinical Studies Confirming Safety

REC-994 Phase 1 Studies - well-tolerated with no dose-dependent adverse events in SAD and MAD

MAD Study	Placebo	50 mg	200 mg	400 mg	800 mg
Total Number of TEAEs	5	0	10	4	15
Total Subjects with \geq one TEAE	4	0	3	3	4
Severity					
Mild	3	0	3	3	3
Moderate	1	0	0	0	1
Severe	0	0	0	0	0
Relationship to Study Drug					
None	3	0	0	2	1
Unlikely	1	0	1	1	2
Possibly	0	0	0	0	0
Likely	0	0	2	0	1
Definitely	0	0	0	0	0
Total Number of SAEs	0	0	0	0	0
Total Subject with \geq one TEAE	0	0	0	0	0
Discontinued Study Drug Due to AE	0	0	0	0	0

Source: REC-994 for the Treatment of Symptomatic Cerebral Caverosus Malformation (CCM) Phase 1 SAD and MAD Study Results. Oral Presentation at Alliance to Cure Scientific Meeting, 2022 Nov 17



Phase 2 trial initiated in Q1, 2022

Enrollment Criteria

- MRI-confirmed CCM lesion(s)
- Familial or sporadic
- Symptoms directly related to CCM

Outcome Measures

- Primary: Safety and tolerability
 - Adverse events & symptoms
- Secondary: Efficacy
 - Clinician-measured outcomes (CGI and PGI)
 - Imaging of CCM lesions – number, size & rate of change
 - Impact of acute stroke (mRS, NIHSS)
 - Patient reported outcomes (SMSS, PROMIS-29, CCM HI, symptom questionnaires)
- Exploratory: Biomarkers

Screening & Randomization 1:1:1	Treatment	Follow-up
---------------------------------	-----------	-----------



Trial Update

- Enrollment is complete
- Several participants have completed twelve months of treatment and entered long-term extension study
- Top-line data expected H2, 2024

Source: <https://www.clinicaltrials.gov/ct2/show/NCT05130866?term=recursion&draw=2&rank=3>; <https://www.SycamoreCCM.com/>

REC-2282 for the Treatment of Progressive Neurofibromatosis Type 2 (NF2) Mutated Meningiomas

Target / MOA	HDAC Inhibitor
Molecule Type	Small Molecule
Lead Indication(s)	NF2 Mutated Meningiomas
Status	Phase 2/3
Designation(s)	Fast Track; US and EU Orphan Drug
Source of Insight	Recursion OS

Clinical: NF2
POPLAR Clinical Trial : REC-2282 for NF2 Part A Underway

PREVALENCE & STANDARD OF CARE

~33,000 Treatable US + EU

No approved therapy

- There are no approved drugs for NF2
- Surgery is standard of care (when feasible)
- Location may make complete resection untenable, leading to hearing loss, facial paralysis, poor balance and visual difficulty

CAUSE

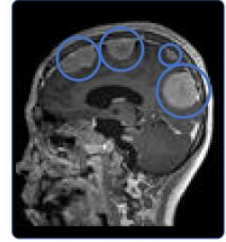
LOF mutations in NF2 tumor suppressor gene, leading to deficiencies in the tumor suppressor protein merlin

PATHOPHYSIOLOGY & REASON TO BELIEVE

Inherited rare CNS tumor syndrome leading to loss of hearing and mobility, other focal neurologic deficits



Efficacy in Recursion OS, cellular, and animal models; suppression of aberrant ERK, AKT, and S6 pathway activation in a Phase 1 PD Study in NF2 patient tumors



Intracranial meningiomas



Ricki – living with NF2

KEY ELEMENTS

- Targeting familial and sporadic NF2 meningioma patients
- HDAC inhibitor, small molecule
- Oral dosing
- Phase 2/3 trial initiated in Q2 2022
- Fast-Track and US & EU Orphan Drug Designation

Clinical: NF2

Disease Overview : Neurofibromatosis Type 2 (NF2)



Ricki - living with NF2

Source: <https://rare-diseases.org/rare-diseases/neurofibromatosis-2>

Patient Population – Large and Diagnosable

- Rare autosomal dominant tumor syndrome resulting from biallelic inactivation of the *NF2* gene which leads to deficiencies in the tumor suppressor protein merlin
- **NF2 can be inherited or spontaneous** (>50% of patients represent new mutations); up to 1/3 are mosaic
- CNS manifestations: meningiomas and vestibular schwannomas; mean age at presentation: **~20 years**

No Approved Medical Therapy

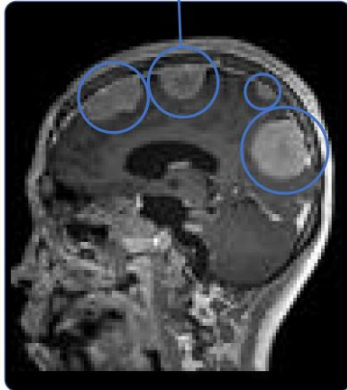
- **No approved drugs** for NF2
- **Surgery** is standard of care (when feasible)
- Location may make complete resection untenable, leading to hearing loss, facial paralysis, poor balance and visual difficulty

Clinical: NF2

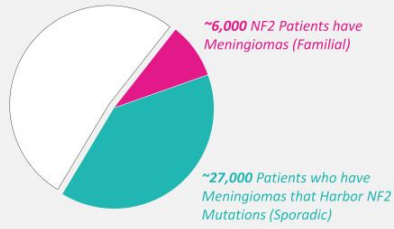
Disease Overview : Neurofibromatosis Type 2 (NF2) Meningiomas

- Most tumors are benign and slow growing but location in CNS leads to serious morbidity or mortality
- Prognosis is adversely affected by early age at onset, a higher number of meningiomas and having a truncating mutation

Intracranial Meningioma



>66,000 Patients have Meningiomas



~33,000

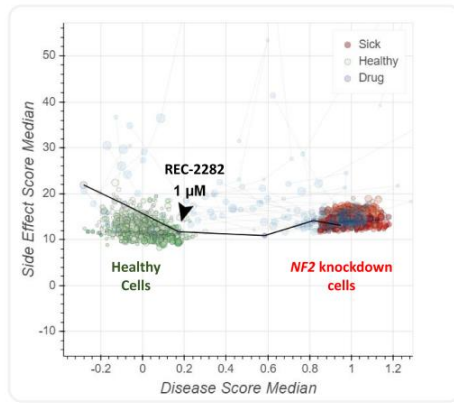
Treatable US + EU5 patients

- Threatens mortality; if amenable, surgical excision is primary intervention
- Many patients have multiple meningiomas that exhibit heterogenous behavior and asynchronous growth
- Stasis or shrinkage of tumor could improve prognosis

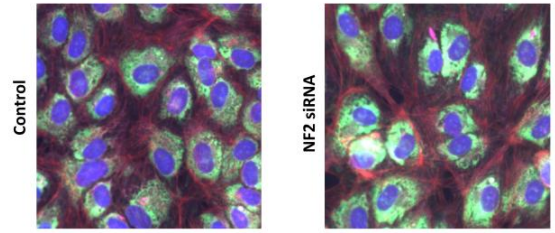
Source: Pevov, et al. Comparative clinical and genomic analysis of neurofibromatosis type 2-associated cranial and spinal meningiomas. Nature. 2020 Jul 28;10(12563). Doi: <https://doi.org/10.1038/s41598-020-59074-z>; NORB

Clinical: NF2

Insight from OS : REC-2282 Rescued Loss of NF2



REC-2282 identified as rescuing HUVEC cells treated with NF2

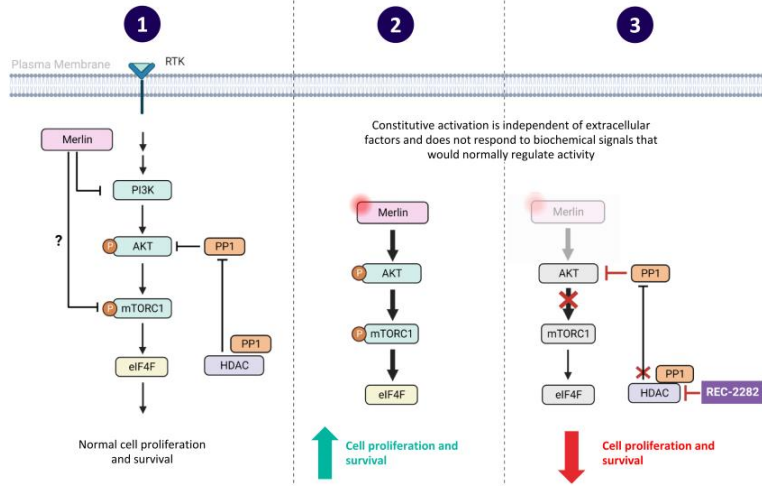


HUVEC, human umbilical vein endothelial cells; NF2, neurofibromatosis type 2; siRNA, small interfering RNA.

Clinical: NF2

REC-2282 – Mechanism of Action

Orally Bioavailable, CNS-penetrating, Small Molecule HDAC Inhibitor



AKT, protein kinase B; eIF4F, eukaryotic initiation factor 4F; HDAC, histone deacetylase; mTor, mammalian target of rapamycin; mTORC1, mammalian target of rapamycin complex 1; NF2, neurofibromatosis type 2; PI3K, phosphoinositide 3-kinase; PP1, protein phosphatase 1; Ras, reticular activating system.

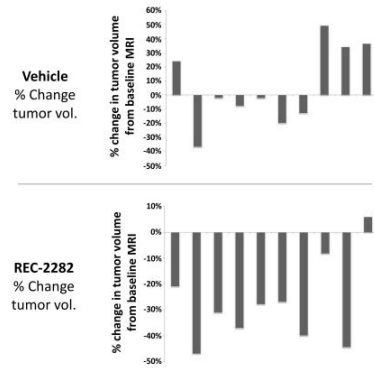
- 1** NF2 encodes for the protein Merlin and negatively regulates mTOR signaling
- 2** Loss of Merlin leads to increased signaling in the PI3K/AKT/mTOR pathway
- 3** Oncogenic mTOR signaling arrested with HDAC inhibitors

Clinical: NF2

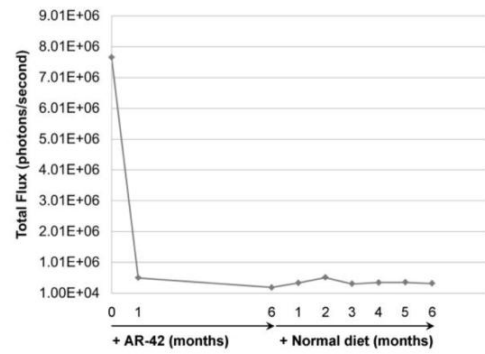
Further Confidence : Preclinical Studies Confirming Insight

REC-2282 preclinical studies demonstrated clear in-vivo efficacy in multiple NF2 tumor types

1 Shrinks vestibular schwannoma xenografts in nude mice



2 Prevents growth & regrowth of NF2-deficient meningioma model in mice



<https://link.springer.com/article/10.1007/s00280-020-04229-3>

Clinical: NF2

Further Confidence : Prior Studies Suggest Potential Therapeutic Benefit

- **Evaluable Patients: CNS Solid Tumors: NF2 N=5; Non-CNS Solid Tumors: N=10**
- PFS: CNS solid tumors = **9.1 months**; Non-CNS solid tumors = **1.7 months**
- Best overall response = **SD in 8/15 patients** (53%; 95% CI 26.6–78.7)
- Longest duration of follow-up without progression: > **27 months** (N=1)
- Most common AEs: **cytopenia, fatigue, nausea**



Well understood clinical safety ...



Multiple investigator-initiated studies in oncology indications



Lengthy human clinical exposure in NF2 – multiple patients on drug for several years



Well-characterized side effect profile

... with a drug-like profile



Established and scalable API manufacturing process



Multiple cGMP batches of 10mg and 50mg tablets have been manufactured

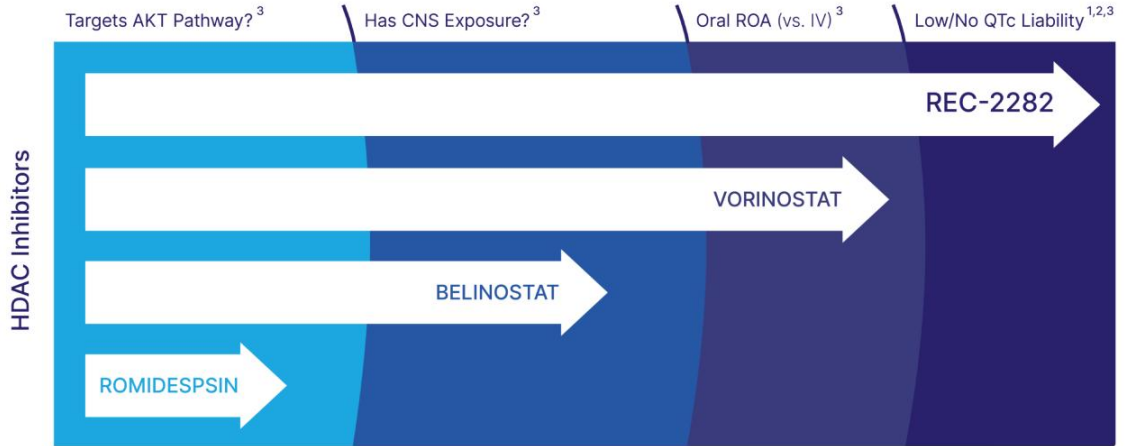


Excellent long-term stability

Clinical: NF2

REC-2282 Appears Well Suited for NF2 vs Other HDAC Inhibitors

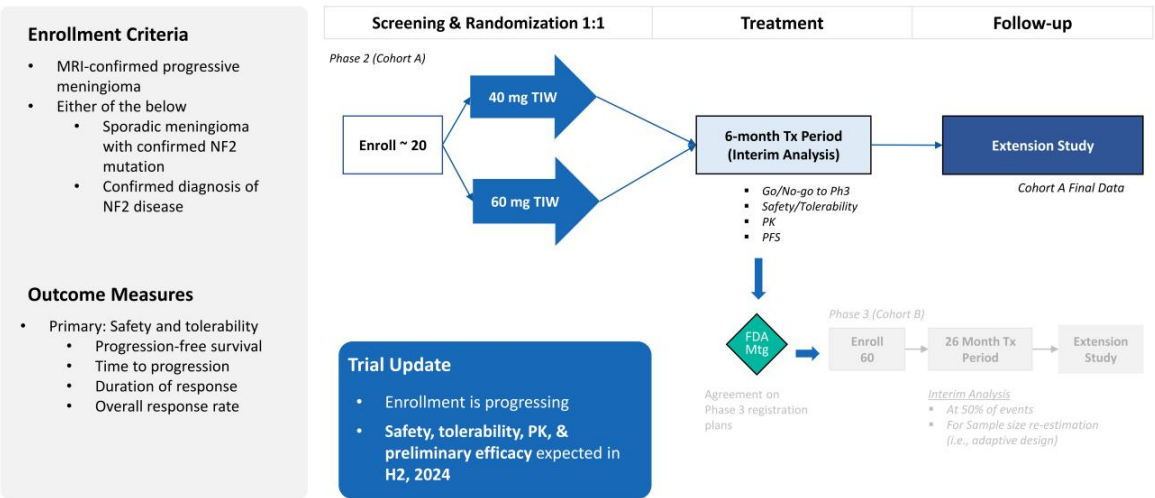
REC-2282 Would be First-In-Class HDAC Inhibitor for Treatment of NF2 Meningiomas



¹Sborov DW, et al. A phase 1 trial of the HDAC inhibitor AR-42 in patients with multiple myeloma and T- and B-cell lymphomas. *Leuk Lymphoma*. 2017 Oct;58(10):2310-2318.
²Collier KA, et al. A phase 1 trial of the histone deacetylase inhibitor AR-42 in patients with neurofibromatosis type 2-associated tumors and advanced solid malignancies. *Cancer Chemother Pharmacol*. 2021 May;87(5):599-611.
³Prescribing information of Vorinostat/Belinostat/Romidespsin respectively

Clinical: NF2
POPLAR Clinical Trial : REC-2282 for NF2 Part A Underway

Phase 2/3 trial initiated in Q2, 2022



<https://clinicaltrials.gov/ct2/show/NCT05130866>

REC-4881 for the Treatment of Familial Adenomatous Polyposis (FAP)

Target / MOA	MEK Inhibitor
Molecule Type	Small Molecule
Lead Indication(s)	Familial Adenomatous Polyposis
Status	Phase 2
Designation(s)	Fast Track; US and EU Orphan Drug
Source of Insight	Recursion OS



Clinical: FAP

TUPELO Clinical Trial : REC-4881 for FAP Phase 2 Underway

PREVALENCE & STANDARD OF CARE

~50,000 Diagnosed US + EU

No approved therapy

- Colectomy during adolescence (with or without removal of rectum) is standard of care
- Post-colectomy, patients still at significant risk of polyps progressing to GI cancer
- Significant decrease in quality-of-life post-colectomy (continued endoscopies, surgical intervention)

CAUSE

Inactivating mutations in the tumor suppressor gene *APC*

PATHOPHYSIOLOGY & REASON TO BELIEVE

Polyps throughout the GI tract with extremely high risk of malignant transformation



Efficacy in the Recursion OS showed specific MEK 1/2 inhibitors had an effect in context of *APC* LOF. Subsequent *APC*^{min} mouse model showed potent reduction in polyps and dysplastic adenomas



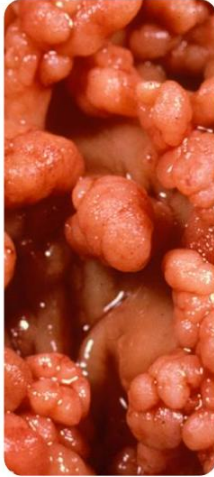
Polyps Found in Colon and Upper GI Tract

KEY ELEMENTS

- Targeting **classical FAP patients (with *APC* mutation)**
- MEK inhibitor, small molecule
- Oral dosing
- Phase 2 trial initiated in Q3 2022
- **Fast-Track** and US & EU **Orphan Drug Designation**

Clinical: FAP

Disease Overview : Familial Adenomatous Polyposis



Polyps Found in Colon and Upper GI Tract

Patient Population – Easily Identifiable

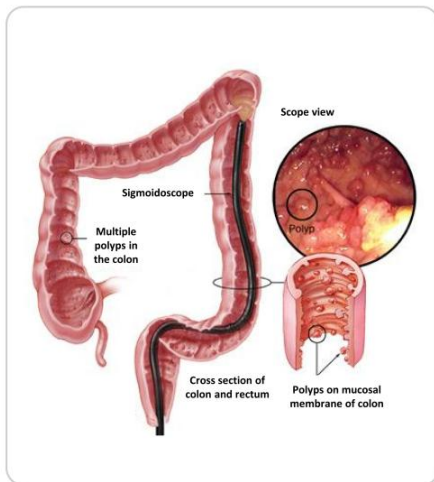
- Autosomal dominant tumor predisposition syndrome caused by a mutation in the APC gene
- Classic FAP (germline mutation) :
 - Hundreds to thousands of polyps in colon and upper GI tract
 - Extraintestinal manifestations (e.g., desmoid tumors)
 - 100% likelihood of developing colorectal cancer (CRC) before age 40, if untreated

~50,000

Diagnosed US + EU5 patients

Clinical: FAP

Disease Overview : Familial Adenomatous Polyposis – Standard of Care



No Approved Medical Therapy

- Standard of care: colectomy during adolescence (with or without removal of rectum)
- Post-colectomy, patients still at significant risk of polyps progressing to GI cancer
- Significant decrease in quality-of-life post-colectomy; continued endoscopies and surgical intervention

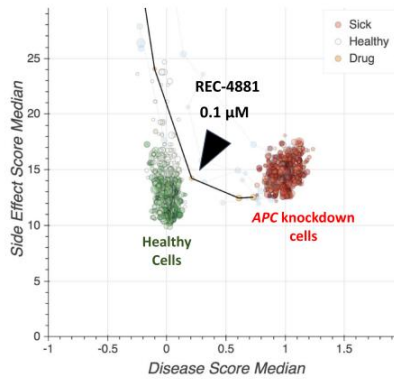
“Despite progress with surgical management, the need for effective therapies for FAP remains high due to continued risk of tumors post-surgery”

- Niloy Jewel Samadder, MD, Mayo Clinic

Clinical: FAP

Insight from OS : Rescued Loss of APC, Inhibited Tumor Growth

REC-4881 rescued phenotypic defects of cells with APC knockdown

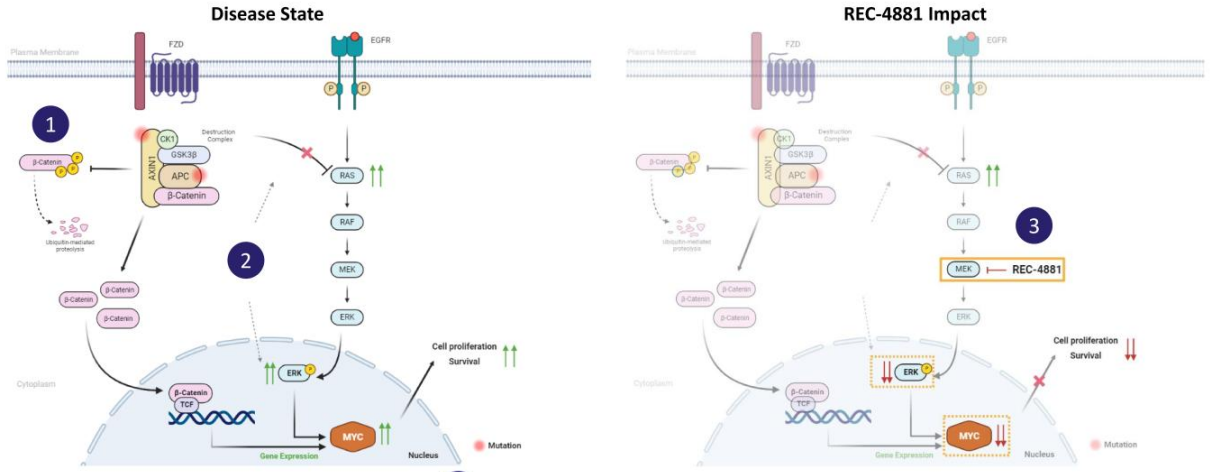


- Compared to thousands of other molecules tested, REC-4881 rescued phenotypic defects substantially better (including better rescue than other MEK inhibitors) for APC specific knockdown
- Findings validated in tumor cell lines and spheroids grown from human epithelial tumor cells with APC mutation
 - 1,000x more selectivity in tumor cell lines with APC mutation
 - Inhibited growth and organization of spheroids

Clinical: FAP

MoA : REC-4881 Blocks Wnt Mutation Induced MAPK Signaling

Orally Bioavailable, Small Molecule MEK Inhibitor



3 REC-4881 inhibits MEK 1/2 and recovers the destabilization of RAS by the β-Catenin destruction complex, restoring the cell back to a Wnt-off like state

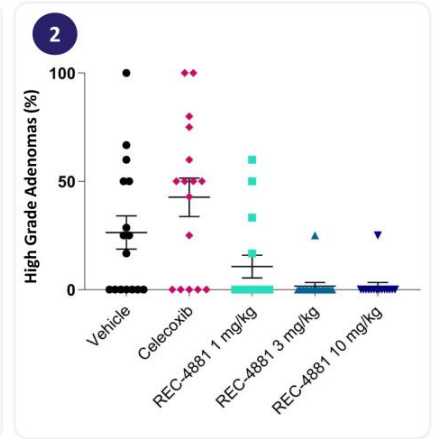
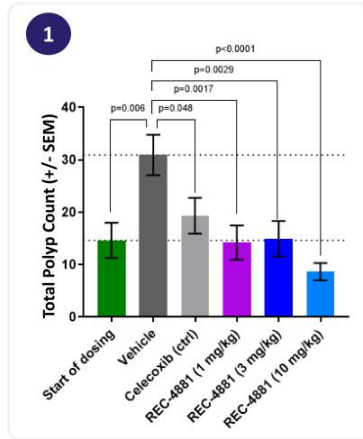
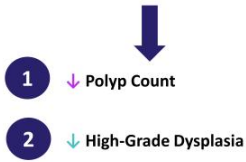
Jean, WJ, et al. (2018). Interaction between Wnt/β-catenin and RAS-ERK pathways and an anti-cancer strategy via degradations of β-catenin and RAS by targeting the Wnt/β-catenin pathway. *npj Precision Oncology*, 2(5).

Clinical: FAP

Further Confidence : Preclinical Studies Confirming Reduction in Polyp Count and High-Grade Dysplasia

- In-vivo efficacy in APC^{min} mouse model
- Apc^{min} = FAP disease model
- Mice treated once daily for 8 weeks

After 8 weeks of treatment:



APC, adenomatous polyposis coli; ERK, extracellular signal-regulated kinase; FAP, familial adenomatous polyposis.

Clinical: FAP

Further Confidence : Clinical Data Generated by Recursion

REC-4881-101: Single-center, double-blind, placebo-controlled, dose-escalation study in healthy volunteers

- Group 1 (n=13): Food effect crossover (REC-4881 4 mg/PBO [fed/fasted]), followed by single dose REC-4881 8 mg/PBO [fed]
- Group 2 (n=12): Matched single ascending dose (REC-4881 4 mg/PBO; REC-4881 8 mg/PBO; REC-4881 12 mg/PBO)

Accomplished



Recursion formulation yields exposures comparable to Takeda's formulation (molecule in-licensed from Takeda)



No food effect



Dose proportional increases in exposure



Similar to C20001 study, observed pERK inhibition (i.e., target engagement) at 8 mg and 12 mg doses



Acceptable safety profile

Note: AE, adverse event; MEK, mitogen-activated protein kinase; NHV, normal healthy volunteer; pERK, phosphorylated extracellular signal-regulated kinase; SAE, serious adverse event.



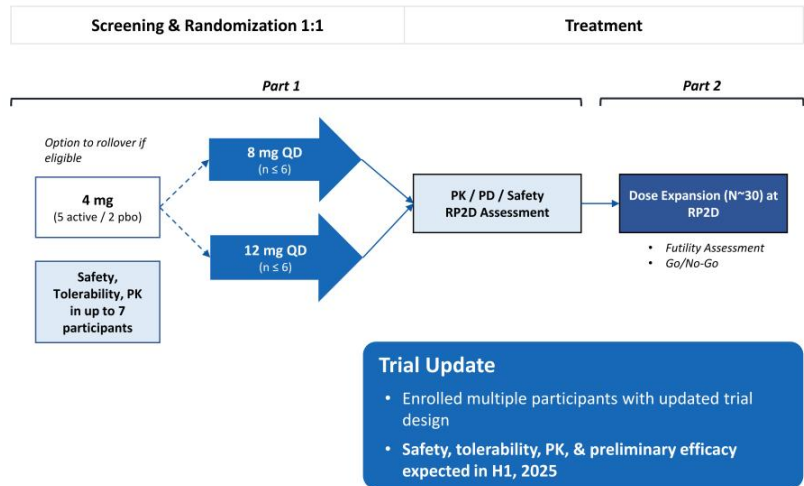
Phase 2 trial initiated in Q3, 2022

Enrollment Criteria

- Confirmed APC mutation
- Post-colectomy/proctocolectomy
- No GI cancer present
- Polyps in either duodenum (including ampulla of Vater) or rectum/pouch

Outcome Measures

- Primary:
 - Part 1: PK
 - Part 2: polyp burden (% change from baseline)
- Secondary:
 - Part 1: Safety & tolerability
 - Part 2: PK; PD; change from baseline in polyp number, histological grade, disease score



Trial Update

- Enrolled multiple participants with updated trial design
- Safety, tolerability, PK, & preliminary efficacy expected in H1, 2025

<https://clinicaltrials.gov/ct2/show/NCT05527555>, protocol amendments made to enhance quality and accelerate the pace of the trial

REC-4881 for the Treatment of Solid Tumors with AXIN1 or APC Mutant Cancers

Target / MOA	MEK Inhibitor
Molecule Type	Small Molecule
Lead Indication(s)	Solid Tumors with AXIN1 or APC Mutant Cancers
Status	Phase 2
Source of Insight	Recursion OS

Clinical: AXIN1 or APC

Clinical Program : REC-4881 for AXIN1 or APC Mutant Cancers

PREVALENCE & STANDARD OF CARE

~65,000 Treatable US + EU5

Substantial need for developing therapeutics for patients harboring mutations in *AXIN1* or *APC*, as **these mutations are considered undruggable**

To our knowledge, REC-4881 is the **only industry sponsored small molecule therapeutic** designed to enroll solid tumor patients harboring mutations in *AXIN1* or *APC*

CAUSE

LOF mutations in *AXIN1* or *APC* tumor suppressor genes

PATHOPHYSIOLOGY & REASON TO BELIEVE

Alterations in the WNT pathway are found in a **wide variety of tumors** and confer poor prognosis and resistance to standard of care



Efficacy in the Recursion OS and favorable results in PDX models harboring *AXIN1* or *APC* mutations vs wild-type leading to a significant PFS benefit in HCC and Ovarian tumors



KEY ELEMENTS

- Targeting *AXIN1* or *APC* mutant cancers
- MEK inhibitor, small molecule
- Oral dosing
- IND accepted by FDA
- Expect to **initiate Phase 2** study in **Q4, 2023**



Gross morphology of HCC

Clinical: AXIN1 or APC

Disease Overview : *AXIN1* or *APC* Mutant Cancers



Gross morphology of HCC tumor

- **Sustained Wnt signaling** is a frequent driver event found across a wide variety of solid tumors
- Dysregulation of β -catenin destruction complex due to inactivating mutations in *AXIN1* or *APC* leads to **sustained Wnt signaling promoting** cancer progression and survival¹
- *AXIN1* or *APC* **mutant solid tumors** are considered clinically aggressive and resistant to standard treatments

“Nothing in HCC has immediate therapeutic relevance and the most common mutations are TERT, TP53, and Wnt (CTNNB1/*AXIN1*/*APC*) and combined these alterations define almost 80% of patients and are not targetable”

- KOL, Clinical Investigator, Texas

¹ Bagter, J.M., et al. *Net Rev Cancer*, 2021, 21, pp.5-21

Clinical: AXIN1 or APC

Disease Overview : AXIN1 or APC Mutant Cancers

Tumor Type	AXIN1 Mutation Frequency ¹	APC Mutation Frequency ¹	Treatable Population ² (US+EU5)
CRC	3%	70%	27,450
LUAD	4%	11%	14,000
Prostate	2%	11%	6,700
Bladder	3%	8%	5,100
HCC	12%	5%	3,100
Endometrial	8%	12%	2,600
Esophageal	2%	7%	2,600
PDAC	1%	2%	1,500
Ovarian	1%	3%	1,400
TNBC	1%	2%	300

~65,000

Flexible Patient Selection Strategy and Study Design

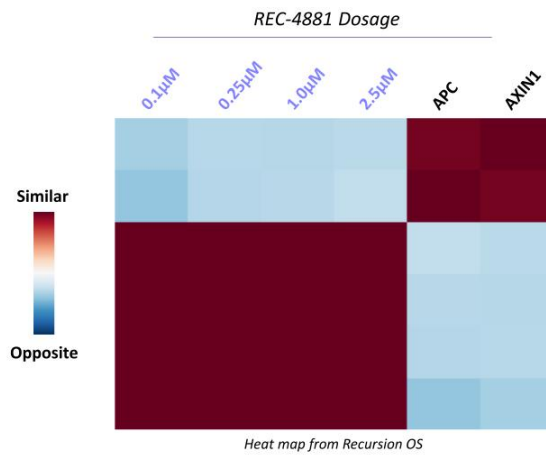
- AXIN1 and APC genes covered by commercially available NGS panels and liquid biopsy detection assays
- FDA guidance supports utility of ctDNA as patient selection for the detection of alterations for eligibility criteria and as a stratification factor for trials enrolling marker-positive and marker-negative populations³
- Multiple tumor types will inform study design and patient selection

Preclinical data with REC-4881 at clinically relevant exposures in HCC and Ovarian PDX mouse models gives confidence to pursue other mutant cancer types

¹ Obtained from cbiportal.org. ² Represents 2L treatable population estimates; obtained from DRG. ³ <https://www.fda.gov/media/158072/download>

Clinical: AXIN1 or APC

Insight from OS : Novel Insight around Established MoA



Hypothesis: Rescue of *AXIN1* may impact tumor progression and/or restore checkpoint sensitivity in cancers driven by *AXIN1* loss

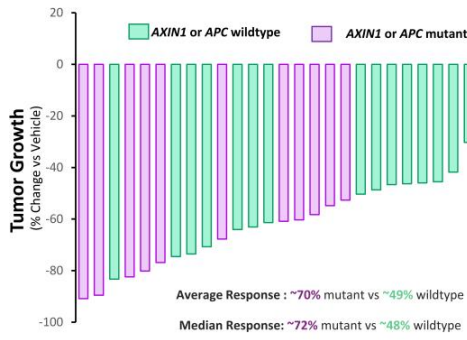
Recursion Differentiation: REC-4881 rescues tumor suppressor genes *APC* and *AXIN1*

- *APC* and *AXIN1* are negative regulators of Wnt signaling
- Both proteins form part of the B-catenin destruction complex. Strong clustering suggests map recapitulation of this biology

Clinical: AXIN1 or APC

Further Confidence : Preclinical Studies Confirming Insight

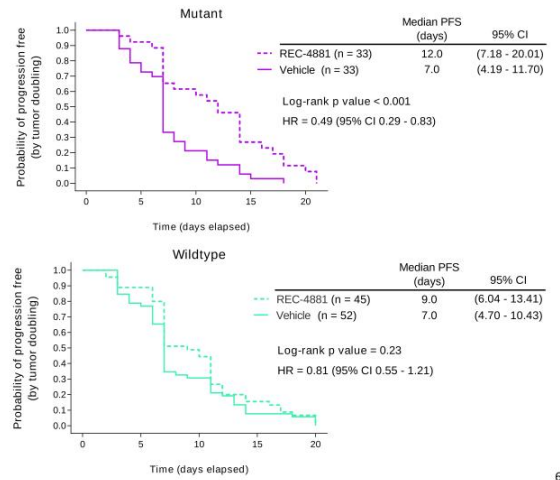
Efficacy found in In Vivo Mice Models ...



- Significantly greater antitumor activity observed with REC-4881 in mutant models versus wildtype
- Majority of mutant models $\geq 60\%$ tumor growth inhibition, which is considered a benchmark for a response in the clinic¹

Note: REC-4881 dosed at 3 mg/kg QD for up to 21 days. 3 mice per treatment per model (3 x 3 x 3) design. ¹Wang, H., et al. Clin Cancer Res, 2012, 18:14, pp.3846-3855

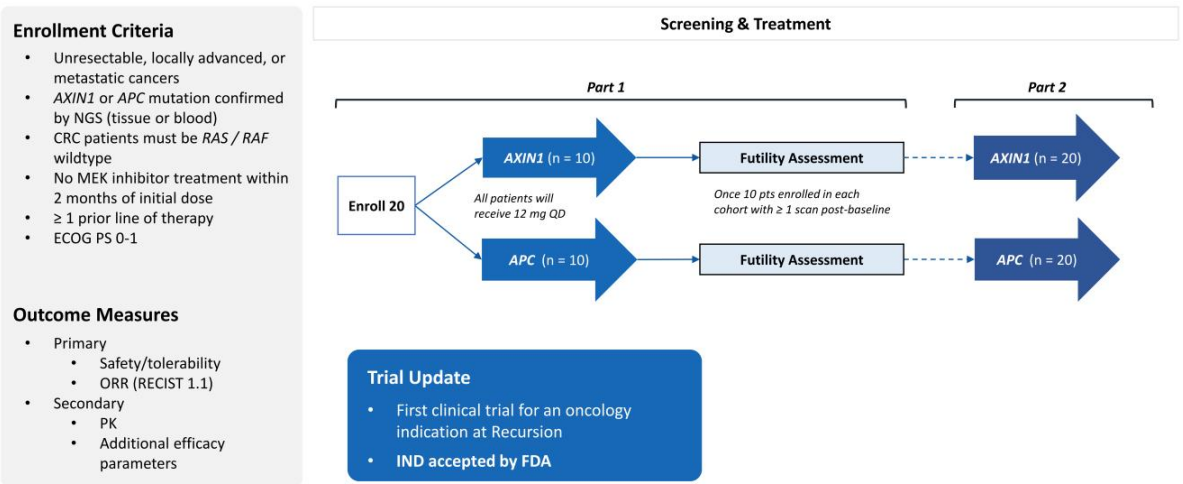
... Led to Significant Progression Free Survival



Clinical: AXIN1 or APC

Phase 2 Trial Design : REC-4881 for AXIN1 or APC Mutant Cancers

Expect Phase 2 initiation in Q4, 2023



REC-3964 for the Treatment of C. Difficile Infection

Target / MOA	Selective C. diff Toxin Inhibitor
Molecule Type	Small Molecule
Lead Indication(s)	C. Difficile Infection
Status	Phase 1
Source of Insight	Recursion OS

Clinical: C. Difficile

Clinical Trial : REC-3964 for C. Difficile Phase 1 study complete

PREVALENCE & STANDARD OF CARE

~730,000 Diagnosed US + EU5

Standard of care includes antibiotic therapies which can further impair gut flora, and lead to relapse

CAUSE

C. difficile toxins from colonizing bacterium causes degradation of colon cell junction, toxin transit to bloodstream, and morbidity to host

KEY ELEMENTS

- Selective C. diff toxin inhibitor, small molecule
- **Non-antibiotic approach** with potential for combination with SOC and other therapies
- Designed for **selective antitoxin pharmacology** to target infection
- FIH Phase 1 trial initiated in Q3 2022

PATHOPHYSIOLOGY & REASON TO BELIEVE

Highly recurrent infectious disease with severe diarrhea, colitis, and risk of toxic megacolon, sepsis, and death



Recursion OS identified a new chemical entity for recurrent C. difficile infection and potentially prophylaxis via glycosyl transferase inhibition with potential to be orally active



TRIAL UPDATE

- **Phase 1 PK study complete**
- REC-3964 has been **well tolerated** and no safety issues have been identified to date
- Complete safety and PK data **readout expected Q3, 2023**



Colleen - lived with rCDI

Clinical: C. Difficile

Disease Overview : C. Difficile Infection (CDI)



Colleen – lived with rCDI

Source, CDC **NAAT = Nucleic Acid Amplification Test; ***rCDI = recurrent CDI

Patient Population – Large, Diagnosable and Easy to Identify

- Symptoms caused by clostridioides difficile tissue-damaging toxins released in the colon
- Patients who experience >3 unformed stools are diagnosed via NAAT* for toxin gene or positive stool test for toxins
- Patients who are at highest risk are those on antibiotics, and frequently visit hospitals or are living in a nursing home
- More than **80% of cases** occur among patients **age 65** or older

Large, Unmet Need with Significant Cost Burden

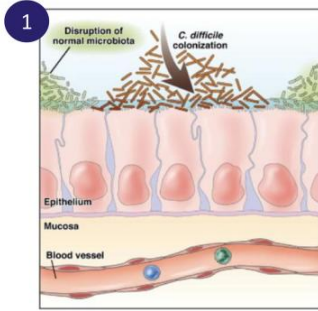
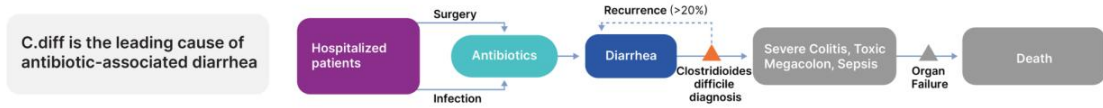
- RCDI** occurs in **20-30%** of patients treated with standard of care
 - 40% of those patients will continue to recur with 2+ episodes
- **>29,000 patients** die in the US each year from CDI
- Cost burden of up to **\$4.8bn annually**

~730,000

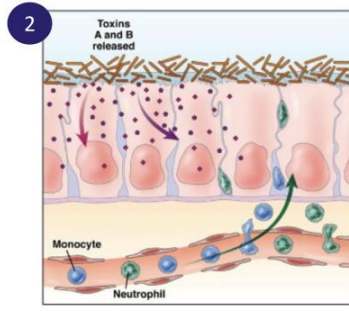
Diagnosed US + EU patients

Clinical: C. Difficile

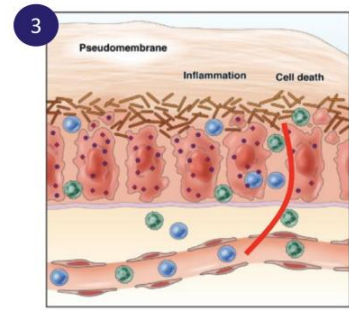
Disease Overview : C. Difficile Infection (CDI)



1 Disruption of microbiota and colonization of C. diff



2 Release of C. diff toxins

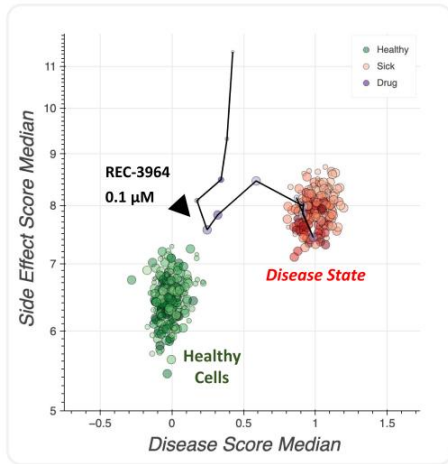


3 Degradation of colon cell junction & toxin transit to bloodstream

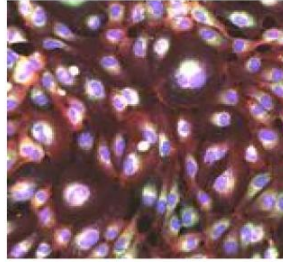
Source: McCallum, D., Rodriguez, JM. Detection, Treatment, and Prevention of Clostridium difficile Infection. Clinical Gastroenterology and Hepatology 2012 Mar 19. <https://doi.org/10.1016/j.cgh.2012.03.008>

Clinical: C. Difficile

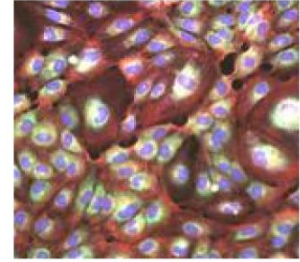
Insight from OS : REC-3964 Rescued Cells Treated with C. Difficile Toxins



REC-3964 identified as a NCE that demonstrated strong rescue in HUVEC cells treated with C. diff toxin



C. diff toxin B phenotype

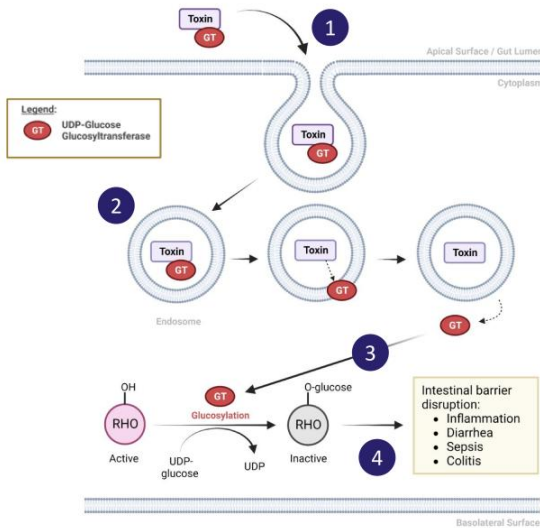


Healthy Control

Clinical: C. Difficile

REC-3964 : Selective Inhibitor of C. Difficile Toxins

REC-3964 is Recursion's 1st Small Molecule NCE to Reach the Clinic



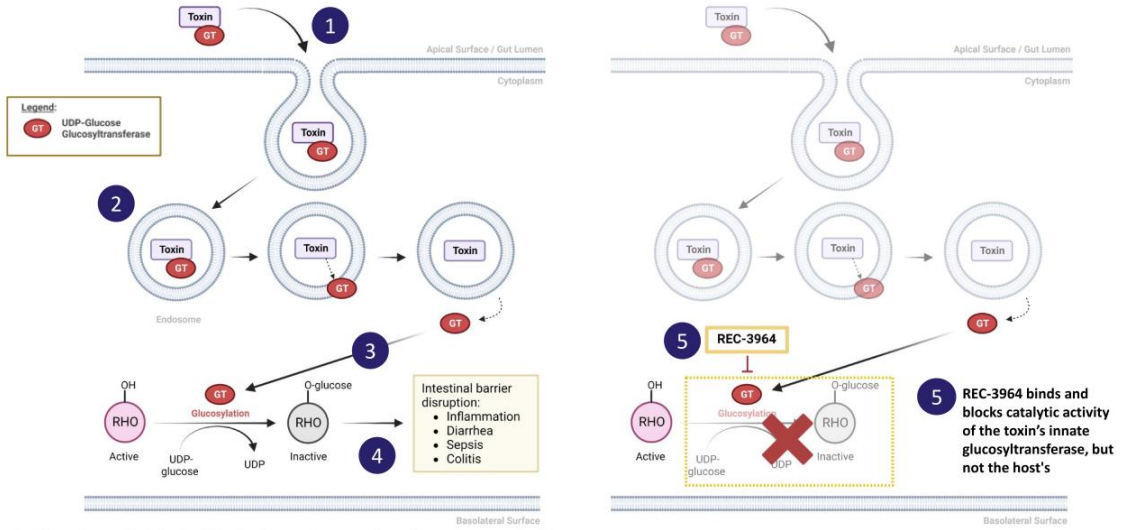
Adapted from Awad et al. 2014

- 1 C.diff toxins bind to cell surface receptors and trigger endocytic event
- 2 Autocatalytic cleavage event releases C.diff toxin's glucosyltransferase enzymatic domain into the cytosol of the infected cell
- 3 The glucosyltransferase locks Rho family GTPases in the inactive state
- 4 Inactivation of Rho GTPases alters cytoskeletal dynamics, induces apoptosis, and impairs barrier function which drives the pathological effects of C.diff infection

Clinical: C. Difficile

REC-3964 : Selective Inhibitor of C. Difficile Toxins

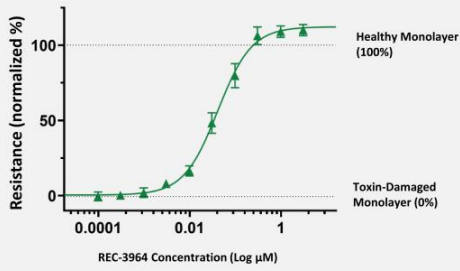
REC-3964 is Recursion's 1st Small Molecule NCE to Reach the Clinic



Clinical: C. Difficile

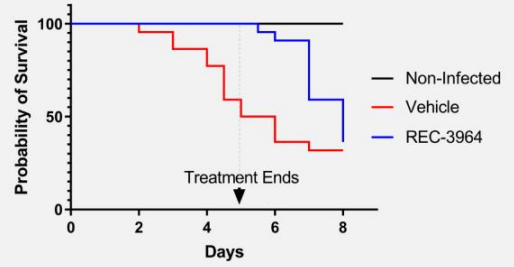
Further Confidence : Preclinical Studies Confirmed Recursion OS Insight

REC-3964 rescues barrier integrity with increasing concentrations



- ✓ REC-3964 restores gut epithelial barrier integrity, which when disrupted causes inflammation and diarrhea

REC-3964 improved probability of survival in a hamster model of C. difficile infection



- ✓ Improved probability of survival beyond treatment completion

Clinical: C. Difficile

Clinical Trial : REC-3964 for C. Difficile Phase 1 study complete

Phase 1 FIH SAD/MAD Trial initiated in Q3 2022

Trial Design

- Randomized, Double-blind Trial

Population

- Healthy Subjects
- SAD (n = 56)
- MAD (n = 50)

Primary Objectives

- ✓ Assess the safety & tolerability of SAD and MAD of REC-3964
- ✓ Evaluate the PK profile of REC-3964 after single and multiple doses

Trial Update

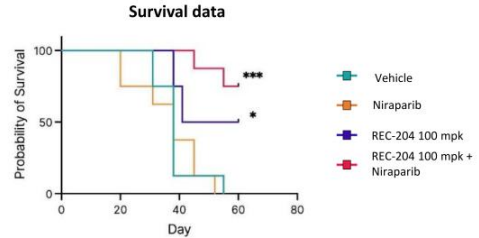
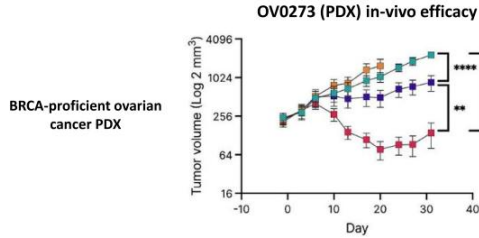
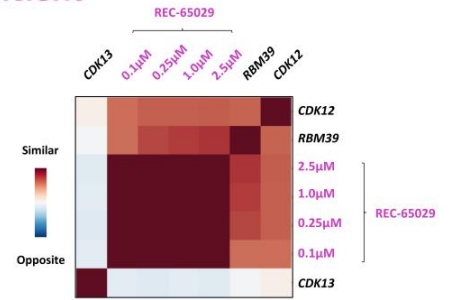
- REC-3964 has been well tolerated and no safety issues have been identified to date
- Expect to share complete safety and PK data readout in Q3, 2023

Next Steps

- Evaluating the potential of conducting a PoC study in patients
- Exploring partnering opportunities

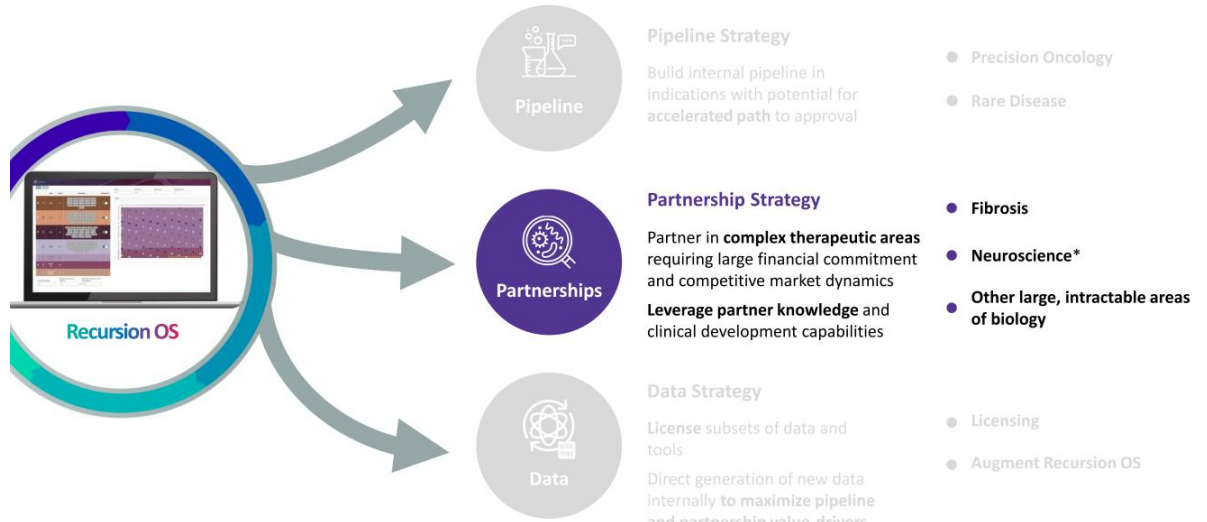
RBM39: Novel CDK12-Adjacent Target for HR-Proficient Ovarian Cancer

GOAL	Identify potential first-in-class tumor-targeted precision therapeutic NCE with novel MOA capable of potentially treating HR-proficient ovarian cancer
INSIGHT FROM OS	Inhibition of target RBM39 (previously referred to as Target γ) may mimic the inhibition of CDK12 while mitigating toxicity related to CDK13 inhibition
FURTHER CONFIDENCE	A Recursion-generated NCE showed single agent efficacy that is enhanced in combination with Niraparib in a BRCA-proficient PDX model
NEXT STEPS	IND-enabling studies are progressing



Note: in the OV0273 PDX model, mice were treated with a representative lead molecule REC-1170204 (100 mg/kg, BID, PO) & Niraparib (40 mg/kg, QD, PO) for 32 days. Single agent REC-1170204 or in combination with Niraparib resulted in a statistically significant response vs either Niraparib or vehicle arms. In addition, there was a statistically significant improvement in survival > 30 days post final dose. *p<0.05, ** p<0.01, *** p<0.0001.

Harnessing value with a multi-pronged capital-efficient business strategy



*Includes a single oncology indication from our Roche and Genentech collaboration.

Our existing partnerships represent some of the most significant scientific collaborations in TechBio across biopharma and tech



(Announced Sep 2020; Expanded Dec 2021)

Fibrosis

- **\$30M upfront and \$50M equity investment**
- Up to or exceeding **\$1.2B in milestones** for up to or exceeding 12 programs
- **Mid single-digit royalties** on net sales
- Recursion owns all **algorithmic improvements**

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Genentech

A Member of the Roche Group

(Announced Dec 2021)

Neuroscience
*and a single oncology indication

- **\$150M upfront** and up to or exceeding **\$500M in research milestones and data usage options**
- Up to or exceeding **\$300M in possible milestones per program** for up to **40 programs**
- **Mid to high single-digit tiered royalties** on net sales
- Recursion owns or **co-owns all algorithmic improvements**

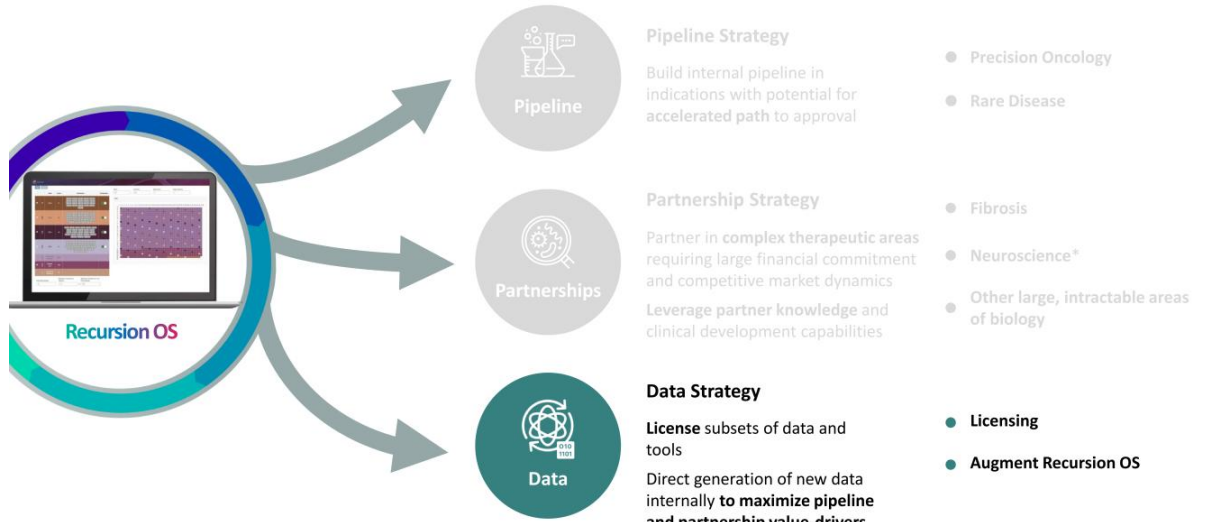


(Announced July 2023)

Computation and ML/AI

- **\$50M equity investment**
- Partnership on **advanced computation** (e.g. foundation model development)
- **Priority access** to compute hardware or **DGXCloud Resources**
- **Potential to house Recursion Tools on NVIDIA's BioNeMo Marketplace**

Harnessing value with a capital efficient business strategy



*Includes a single oncology indication from our Roche and Genentech collaboration.

Data that is reliable and scalable is the Recursion differentiator

Recursion Data Universe: >25 PB of proprietary biological and chemical data, spanning phenomics, transcriptomics, invivomics, and more

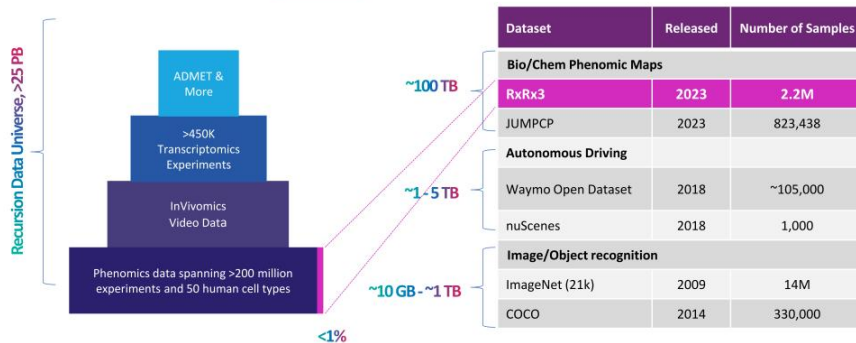
- We believe one of the largest biological and chemical datasets **fit for the purpose of training large-scale ML models**

RXR3: CRISPR knockouts of most of the human genome, 1,600 FDA approved / commercially available bioactive compounds

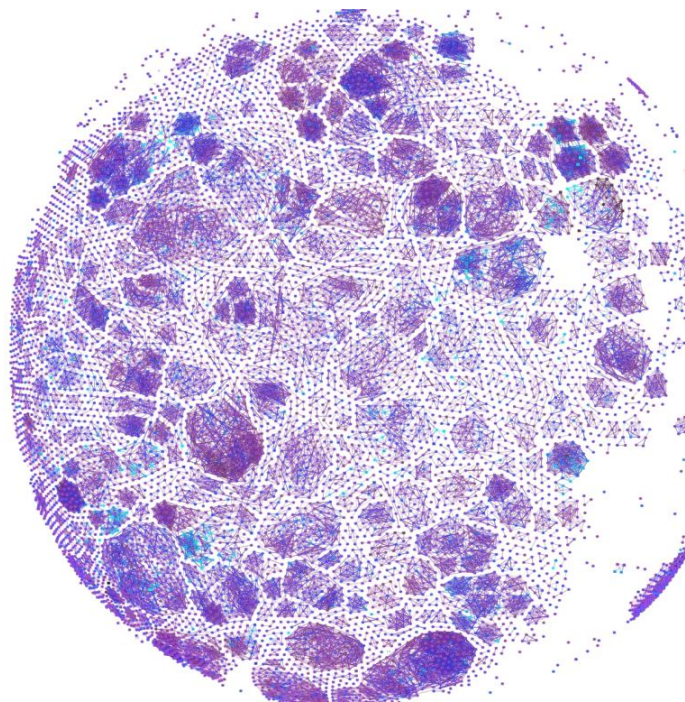
- We believe the **largest public dataset of its kind**, <1% of Recursion Data Universe, what Recursion can generate in ~1 week

MolRec™: freemium web-based **application to explore compound and gene relationships** in RXR3

Start working with RXR3 and MolRec™: www.rxr3.ai



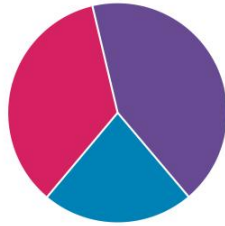
**Value driven by
our team and
our milestones**



What it takes to make this happen – a new kind of team and culture

Team Members

>550 Employees



>50% Advanced degrees

- Life Sciences—biology, chemistry, development, etc.
- Technology—data science, software engineering, automation, etc.
- Strategic Operations

~43% Female ~56% Male ~1% Non-Binary

Parity Pledge Signer
gender parity and people of color parity

ESG Highlights

- ✓ ESG reporting on **Healthcare and Technology Metrics**
- ✓ **100% of electricity** powering our Biohive-1 supercomputer comes from renewable sources
- ✓ Learn more about Recursion’s ESG stewardship: www.recursion.com/esg

Community Impact

altitude ▲ lab
Founding Partner,
Life Science Accelerator

biohive
Founding Member,
Life Science Collective

Committed to ESG Excellence



Prime



Data shown reflective of Q2 2023 and includes Cyclica and Valence acquisitions, gender statistics include participating individuals

Our leadership team brings together experience & innovation to lead TechBio

Board of Directors



R Martin Chavez, PHD
Chairman of RXRX,
Board Member of Alphabet,
Vice-Chairman of 6th Street,
Former CFO/CIO of GS



Chris Gibson, PHD
Co-Founder & CEO



Dean Li, MD PHD
Co-Founder of RXRX,
President of Merck Research
Labs



Zavain Dar
Co-Founder & Partner
of Dimension



Terry-Ann Burrell, MBA
CFO & Treasurer,
Beam Therapeutics



Rob Hershberg, MD PHD
Co-Founder/CEO/Chairman of
HilleVax, Former EVP/CSO/CBO
of Celgene



Blake Borgeson, PHD
Co-Founder of RXRX



Zachary Bogue, JD
Co-Founder & Partner of
Data Collective



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Executive Team



Chris Gibson, PHD
Co-Founder & CEO



Tina Larson
President & COO



Michael Secora, PHD
Chief Financial Officer



Shafique Virani, MD FRCS
Chief Business Officer



David Mauro, MD PHD
Chief Medical Officer



Heather Kirkby, MBA
Chief People Officer



Ben Mabey
Chief Technology Officer



Laura Schaevitz, PHD
SVP and Head of Research



Kristen Rushton, MBA
SVP of Business Operations



Nathan Hatfield, JD MBA
Chief Legal Officer



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What to watch for at Recursion

Upcoming Potential Milestones

Near-Term

- Potential **option exercises** for partnership **programs**
- Potential **option exercises** for **map building** initiatives or data sharing
- Potential for **additional partnership(s)** in large, intractable areas of **biology and / or technological innovation**
- **Ph1 clinical trial readout** for **C. difficile Infection** program expected **Q3, 2023**
- **Ph2 trial initiation** for **AXIN1 or APC mutant cancers** program expected in **Q4, 2023**
- Potential to **accelerate value creation** with **proprietary foundation models** for biology and chemistry
- Potential to open-source data and tools for non-commercial use and **license data and tools to biopharma and other commercial users**

Medium-Term

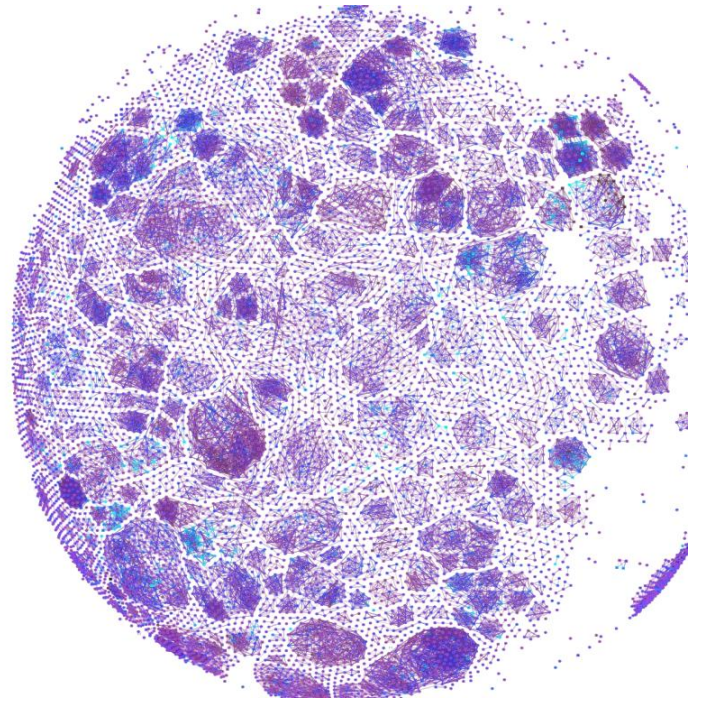
- Multiple **Ph2 readouts** for AI-discovered programs
 - **CCM** top-line data expected **H2, 2024**
 - **NF2 & FAP** safety & preliminary efficacy expected **H2, 2024 & H1, 2025**, respectively
- Potential for **additional INDs and clinical starts**
- Potential **option exercises** for partnership **programs**
- Potential **option exercises** for **map building** initiatives or data sharing
- Potential **additional partnership(s)** in large, intractable areas of **biology and / or technological innovation**
- Recursion OS moves towards **autonomous map building and navigation** with digital and micro-synthetic chemistry

Strong Financials ~\$406M in cash at the end of **Q2, 2023** (does **not** include \$50M NVIDIA investment)

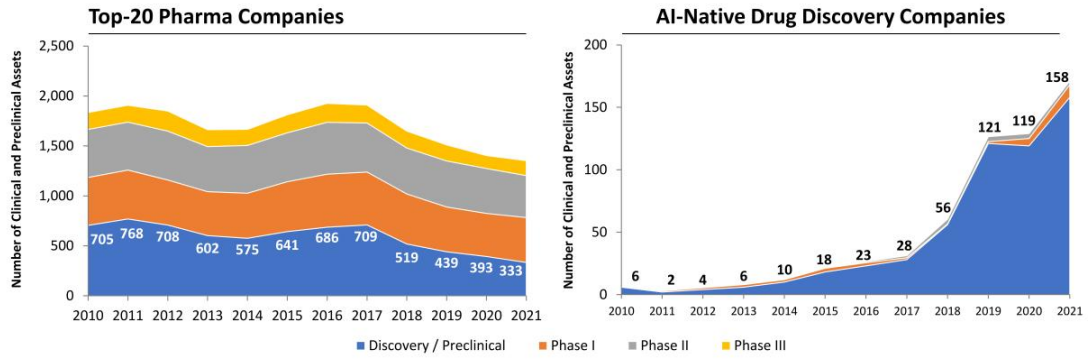
Cash refers to cash and cash equivalents



**Additional
scientific and
business context**



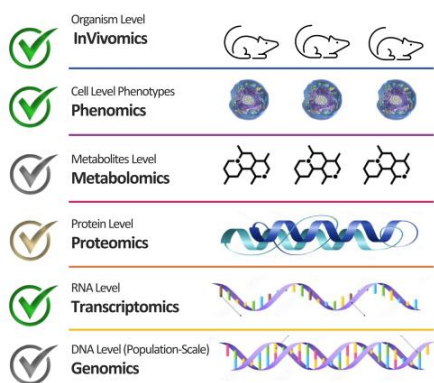
The biopharmaceutical industry faces pressure amidst declining efficiency in drug discovery



AI-enabled drug discovery efforts have proliferated alongside the declining efficiency of traditional approaches

Images adapted from Jayatunga, M., et al. Nature Reviews Drug Discovery 2022.

We build biological and chemical datasets to map relationships across scales and understand the connectivity of the system



✓ Built and scaled
✓ Exploratory
✓ Aspirational

Image adapted from D'Orazio, M., et al. Nature Scientific Reports 2022.

Like digital maps of Earth, **connections within and between layers add useful context.** Similarly, Recursion is **mapping different multiomic layers of biology** and identifying connections within and between layers to **better understand biology at scale.**

Robotic Automation at Scale

Up to 2.2 Million wet-lab experiments per week profiling genes and compounds, we believe we are one of the largest phenomics (human cellular image-based) data producers



Digitization of Biology and Chemistry

>25 Petabytes of proprietary high-dimensional data as of this filing, we believe this is one of the largest reliable *in vitro* biological and chemical datasets



Diverse Biological and Chemical Inputs

50 different human cell types

~1.7 Million small molecule library, we believe this scale is on par with some large pharma companies

~850 Billion hiPSC-derived cells produced since 2022, we believe that we are one of the largest hiPSC-derived cell producers



Recursion OS
Enables quality, reliability and scale of data

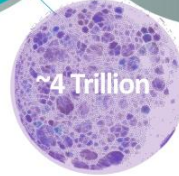
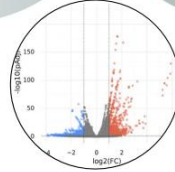


ML-Based Analysis

Top 500 supercomputer across any industry (TOP500 List, Jun 2023), we leverage vast neural networks and multiomics approaches to extract features and drive insights

High-Dimensional Validation

Up to 24K near whole exomes per week, we believe we are one of the largest transcriptomics data producers



ML-Based Relationships

reliable hypotheses across multiple biological and chemical contexts

Novel Insights at Scale

Metrics shown reflective of Q2 2023 unless otherwise indicated

Genome-scale mapping

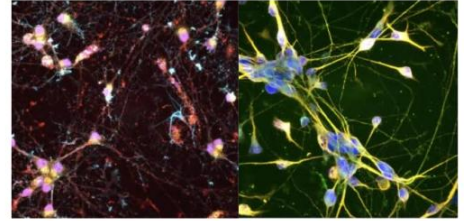
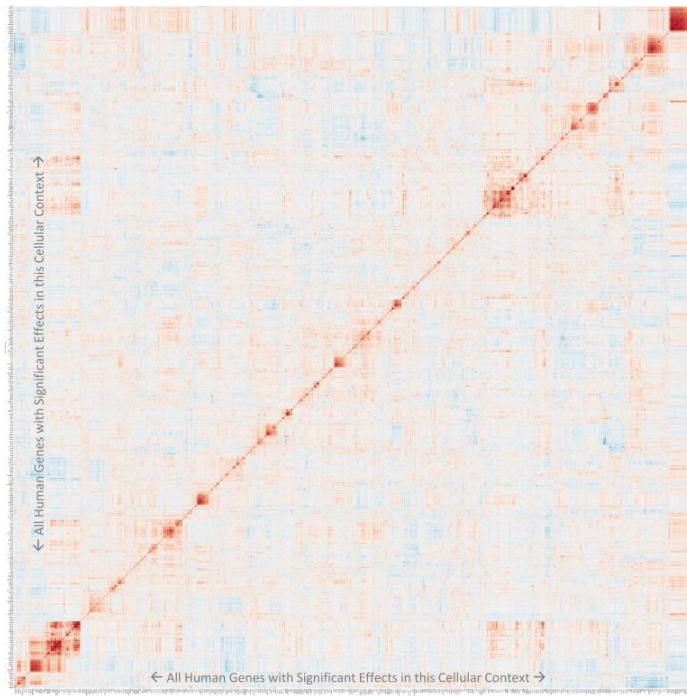
This is a **whole-genome arrayed CRISPR knock-out Map** generated in primary human endothelial cells

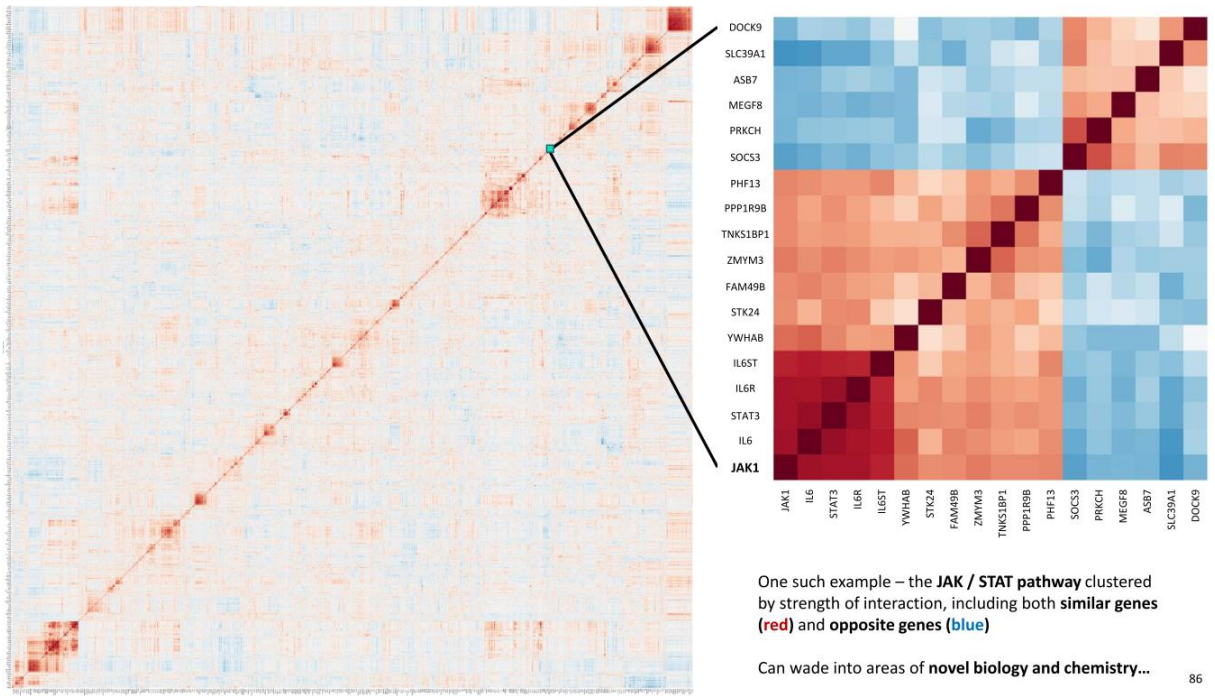
Every gene is represented in a pairwise way (each is present in columns and rows)

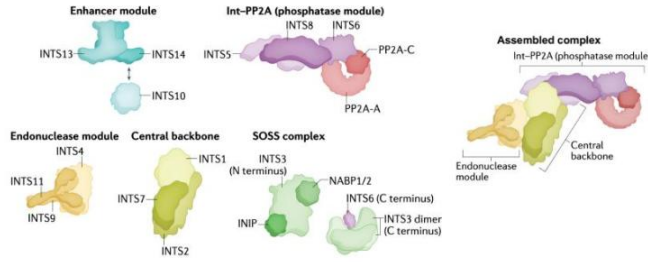
Dark Red indicates phenotypic similarity according to our neural networks while **Dark Blue** indicates phenotypic anti-similarity (which in our experience often suggests negative regulation)

We can add the phenotypes of hundreds of thousands of small molecules at multiple doses and query and interact with these maps using a web application

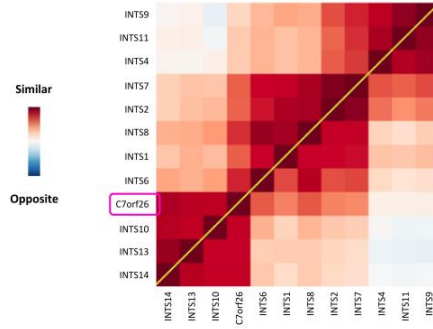
Thousands of examples of known biology and chemistry







Phenomics TVN (below diagram) vs. Centerscale (above diagram)



Maps reveal known and novel biology

- In 2022, new independent research identified a previously unknown gene, C7orf26, as part of the Integrator complex
- Maps jointly developed by Recursion and Genentech replicated this same result
- Demonstrates accuracy and consistency across different map building approaches



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Competitive Benchmarking – Technology Enabled Drug Discovery

	 Recursion.	AbCellera Biologics	Exscientia	Insitro	Schrodinger
Multiple Large-Scale Partnerships¹	✓	✓	✓	✓	✓
Significant Internally Developed Pipeline of Early Programs²	✓	✓	✓		
Multiple Internally Developed Ph2 or Ph3 Clinical Programs³	✓				
Large-Scale Proprietary Biological and Chemical Datasets⁴	✓				

This analysis was performed on a best effort basis leveraging publicly available databases including company websites, press releases, and public filings as of May 1, 2023. [1] Companies with at least two large-scale partnerships with pharmaceutical companies (potential milestones up to or exceeding \$1 billion per partnership). [2] Companies providing clear details on at least ten in-house programs from discovery to preclinical. [3] Companies with at least three programs in either Phase 2 or Phase 3. [4] Companies providing clear details on large-scale proprietary biological and chemical datasets built in-house using internal laboratory capabilities (>20 petabytes).

Source: Frost & Sullivan

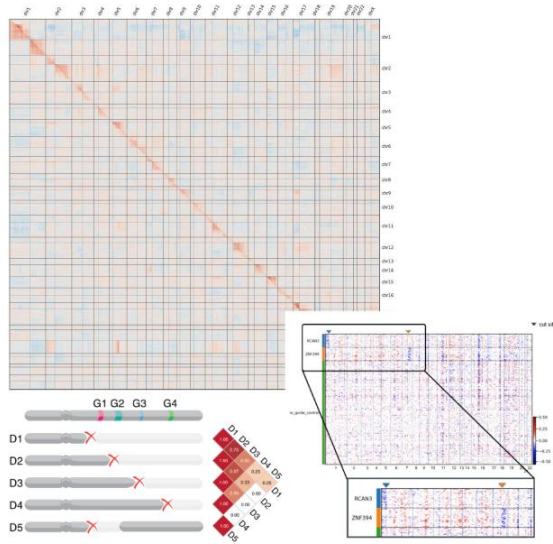
Biology and chemistry are complex – data that is reliable, relatable, and scalable is the Recursion differentiator

Year	2018	2019	2020	2021	2022
Total Phenomics Experiments (Millions)	8	24	56	115	175
Total Transcriptomics Experiments (Thousands)	NA	NA	2	91	258
Data (PB)	1.8	4.3	6.8	12.9	21.2
Cell Types	12	25	36	38	48
Unique Compounds Physically Housed at Recursion ¹ (Millions)	0.02	0.1	0.7	1.0	1.7
In Silico Chemistry Library (Billions)	NA	0.02	3	12	>1,000
Predicted Biological and Chemical Relationships ² (Trillions)	NA	NA	0.01	0.2	3.1

¹ Includes approximately 500,000 compounds from Bayer's proprietary library.

² "Predicted Relationships" refers to the number of Unique Perturbations that have been predicted using our maps.

CRISPR proximity bias revealed using genome-wide phenomics screens



- Recursion demonstrated that **CRISPR-Cas9 editing induces chromosome arm-scale truncations** across the genome
- **Creates a proximity bias** in CRISPR screens which can confound some gene-gene relationships
- Recursion **demonstrated a correction method** leveraging public CRISPR-Cas9 knockout screens to **mitigate bias**
- Read “High-resolution genome-wide mapping of chromosome-arm-scale truncations induced by CRISPR-Cas9 editing” at www.biorxiv.org
- Already in the **top 5% of research outputs** in online engagement www.altmetric.com

COVID-19 research

Drug	Prediction	Correct?
Hydroxychloroquine	x	✓
Lopinavir	x	✓
Ritonavir	x	✓
Remdesivir	✓	✓
Baricitinib	✓	✓
Tofacitinib	✓	✓
Ivermectin	x	✓
Fluvoxamine	x	✓
Dexamethasone	x	x

- Recursion conducted several AI-enabled experiments in April 2020 to investigate therapeutic potential for COVID-19
 - Included FDA-approved drugs, EMA-approved drugs, and compounds in late-stage clinical trials for the modulation of the effect of SARS-CoV-2 on human cells
- Experiments were compiled into the **RxRx19 dataset** (860+ GB of data) and **made publicly available** to accelerate the development of methods and pandemic treatments.
- Recursion OS correctly predicted 8 of 9 clinical trials** associated with early and late-stage COVID-19

Transformational collaborations provide multiple potential value inflection points

Illustrative example of potential value inflection points

