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

FORM 8-K

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

Date of Report (Date of earliest event reported): June 24, 2024

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

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

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

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

Not Applicable
(Former name or former address, if changed since last report.)

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

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Class A Common Stock, 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 7.01. Regulation FD Disclosure.

On June 24, 2024, Recursion Pharmaceuticals, Inc. (the "Company") issued a press release related to announcements made during its Download Day investor meeting. The press release is attached as Exhibit 99.1 to this Current Report on Form 8-K and incorporated into this Item 7.01 by reference.

Also on June 24, 2024, the Company released an updated investor presentation. The investor presentation will be used at its Download Day investor meeting and from time to time in meetings with investors. A copy of the presentation is attached hereto as Exhibit 99.2 to this Current Report on Form 8-K and incorporated into this Item 7.01 by reference.

The information furnished in this Item 7.01 (including Exhibit 99.1 and 99.2), 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 in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such filing.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit Number	Description
99.1	Press Release of Recursion Pharmaceuticals, Inc. dated June 24, 2024.
99.2	Investor Presentation of Recursion Pharmaceuticals, Inc. dated June 24, 2024.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized on June 24, 2024.

RECURSION PHARMACEUTICALS, INC.

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

Recursion Gives Guidance on Seven Clinical Readouts within ~18 Months and Partnership Updates at Its Download Day

- Recursion delivered multiple data packages to Bayer and initiated the first joint oncology project, which is now expected to advance rapidly towards Lead Series nomination
- Bayer to become first external beta-user of LOWE (LLM-Orchestrated Workflow Engine) for drug discovery and development

SALT LAKE CITY, (June 24, 2024) – Recursion (NASDAQ: RXRX), a leading clinical stage TechBio company decoding biology to industrialize drug discovery, will give updated pipeline guidance to investors, analysts, and other stakeholders during Download Day, Recursion's investor and R&D day, on Monday, June 24, 2024.

"Since our last Download Day, which was approximately 18 months ago, we have seen various industries increasingly embrace AI/ML solutions. This adoption has also played out in the drug discovery space," said Chris Gibson, Ph.D., Co-Founder and CEO of Recursion. "Over the past decade, we have created a strong leadership position by building the technological and operational capabilities of our platform in order to expand and advance our internal pipeline as well as deliver for our external partners through the integrated use of data, compute, and automation. We look forward to highlighting the various aspects of the Recursion value proposition at Download Day."

The event will feature a number of prominent speakers, including Jensen Huang, founder and CEO of NVIDIA, Deepak Nijhawan, M.D., Ph.D., UT Southwestern Distinguished Chair in Biomedical Science, and John Marioni, Ph.D.,Senior VP and Head of Computational Sciences at Genentech.

Updated pipeline guidance:

- Seven Clinical Trial Readouts expected within approximately 18 months:
  - *REC-994 Cerebral Cavernous Malformation*—topline Phase 2 data readout in September 2024;
  - *REC-2282 Neurofibromatosis Type 2*—preliminary Phase 2 data readout in the fourth quarter of 2024;
  - *REC-4881 Familial Adenomatous Polyposis*—preliminary Phase 2 data readout in the first half of 2025;
  - *REC-4881 Advanced AXIN1/APC-Mutant Cancers*—preliminary Phase 2 data readout in the first half of 2025;
  - *REC-3964 Clostridioides difficile Infection*—Phase 2 study initiation in the fourth quarter of 2024 and preliminary data readout by the end of 2025;
  - *RBM39 Advanced HR-Proficient Cancers*—IND submission in the third quarter of 2024, Phase 1/2 initiation in the fourth quarter of 2024 and Phase 1 dose-escalation data readout by the end of 2025;
  - *Target Epsilon (Fibrotic Diseases)*—IND submission in early 2025 and Phase 1 healthy volunteer study data readout by the end of 2025.

- Dozens of internal and partner programs in early stages with the first LLM and causal model driven programs entering the Recursion pipeline.

Partnership updates:

- Bayer will be the first beta-user of our LOWE LLM-orchestrated workflow software, which will be integrated across the collaboration and offer a more exploratory, and intuitive research environment for scientists on both sides.
- Additional updates pertaining to the Bayer partnership include:
    - We initiated our first joint oncology project which is now expected to advance rapidly towards Lead Series nomination; and
    - We are on track to complete 25 unique multi-modal data packages that we expect to deliver in the third quarter of 2024.

Platform updates:

- ADME industrialization: potential to achieve an estimated 90 times the amount of lab throughput over a manual approach.
- Built our first genome-scale transcriptomics knockout map.
- Multimodal mapping has enabled us in certain experiments to achieve 90% success on our ability to predict compounds that failed later disease-relevant assays in internal tests and 60% ability to predict compounds that passed later disease-relevant assays in internal tests.
- Helix partnership brings hundreds of thousands of unique de-identified patient records across diverse therapeutic areas.

About Recursion

Recursion is a leading clinical stage TechBio company decoding biology to industrialize drug discovery. Central to its mission is the Recursion Operation System (OS), a platform built across diverse technologies that continuously expands one of the world's largest proprietary biological, chemical and patient-centric 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 what Recursion believes is one of the fastest supercomputers deployed in the sector, Recursion is uniting technology, biology, chemistry and patient-centric data 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, Montreal, London and the San Francisco Bay Area. Learn more at www.Recursion.com, or connect on X (formerly Twitter) and LinkedIn.

Media Contact
Media@Recursion.com

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, Recursion’s anticipated Download Day presentations; Recursion’s ability to decode biology and industrialize drug discovery; the technological and operational capabilities of Recursion’s platform; advancement of Recursion’s internal pipeline and the ability to deliver for its external partners; the advancement of a joint oncology project rapidly towards Lead Series nomination; Bayer becoming the first external beta-user of LOWE and integrating software across the collaboration; the timing for completing 25 unique multi-modal data packages; the timing of IND submissions, clinical trial initiations, and clinical trial readouts; realizing dozens of LLM and causal model driven programs entering the Recursion pipeline; the performance expectations for Recursion’s platform, including 90x of lab throughput over a manual approach, building Recursion’s first genome-scale transcriptomics knockout and multimodal mapping expected capabilities and achievements; Recursion’s continuous expansion of datasets and advancement of the future of medicine; 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; 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 Annual Report on Form 10-K and Quarterly Report on Form 10-Q. 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
Download
Day 2024


Recursion
Download
Day 2024

Agenda

Breakfast & Arrival at Recursion (Upper Level) — 8:30 am – 9:30 am

Morning Session — 9:30 am – 12:30 pm

Welcome

State of Recursion
Chris Gibson PhD – Co-Founder & CEO

Recursion OS
Lina Nilsson PhD – Senior VP of Inception Labs

Preclinical
Laura Schaevitz PhD – Senior VP and Head of Research

Fireside Chat with Deepak Nijhawan, MD, PhD
David Mauro MD PhD – Chief Medical Officer
Deepak Nijhawan MD PhD – UT Southwestern, Distinguished Chair in Biomedical Science

Tours & Demos
Senior Management

Lunch & Break (Upper Level, High Throughput Feeding) — 12:30 – 1:30 pm

Afternoon Session — 1:30 pm – 4:30 pm

Afternoon Convocation
Najat Khan PhD – Chief R&D Officer & Chief Commercial Officer

Partnerships
Matt Kinn – Senior VP of Business Development & Corporate Initiatives
John Marioni PhD – Genentech, Senior VP and Head of Computational Sciences

Clinical Programs
David Mauro MD PhD – Chief Medical Officer

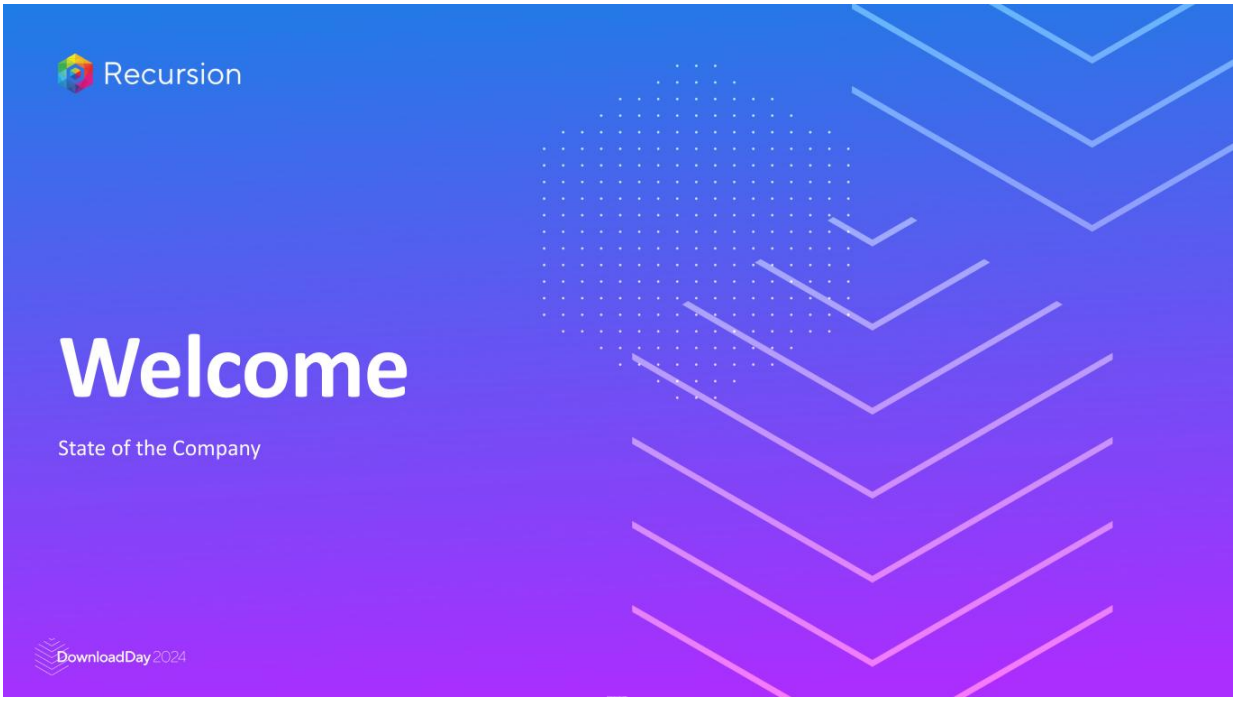
Company & Milestones
Michael Secora PhD – Chief Financial Officer

Break

Fireside Chat with Jensen Huang
Chris Gibson PhD – Co-Founder & CEO
Jensen Huang – NVIDIA, Founder & CEO

Closing Remarks
Chris Gibson PhD – Co-Founder & CEO

Dinner — Mar Muntanya (Hyatt Regency) — 5:00 – 7:00 pm


Recursion
Welcome
State of the Company
DownloadDay 2024

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 Tempus partnership, including our ability to leverage the datasets acquired through the license agreement into increased machine learning capabilities and accelerate clinical trial enrollment; outcomes and benefits expected from the Enamine partnership, including the generating and co-branding of new chemical libraries; outcomes and expected benefits from the Helix partnership, including the development of causal AI models and biomarker and patient stratification strategies; expected BioHive supercomputer capabilities; outcomes and benefits from licenses, partnerships and collaborations, including option exercises by partners, additional partnerships, and the ability to house tools on the BioNeMo Marketplace; the potential for additional partnerships and making data and tools available to third parties; advancements of our Recursion OS, including augmentation of our dataset; outcomes and benefits expected from the Large Language Model-Orchestrated Workflow Engine (LOWE); 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 enrollment in studies, data readouts, and progression toward IND-enabling studies; 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 Annual Report for the Fiscal Year ended December 31, 2023, on Form 10-K and 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.

Certain information contained in this presentation relates to or is based on studies, publications, surveys and other data obtained from third-party sources and the company’s own internal estimates and research. While the company believes these third-party sources to be reliable as of the date of this presentation, it has not independently verified, and makes no representation as to the adequacy, fairness, accuracy or completeness of, any information obtained from third-party sources. In addition, all of the market data included in this presentation involves a number of assumptions and limitations, and there can be no guarantee as to the accuracy or reliability of such assumptions. Finally, while the company believes its own internal research is reliable, such research has not been verified by any independent source.

Cross-trial or cross-candidate comparisons against other clinical trials and other drug candidates are not based on head-to-head studies and are presented for informational purposes; comparisons are based on publicly available information for other clinical trials and other drug candidates.

Any non-Recursion logos or trademarks included herein are the property of the owners thereof and are used for reference purposes only.

Our Hopes for Today

Share details and updates on our:

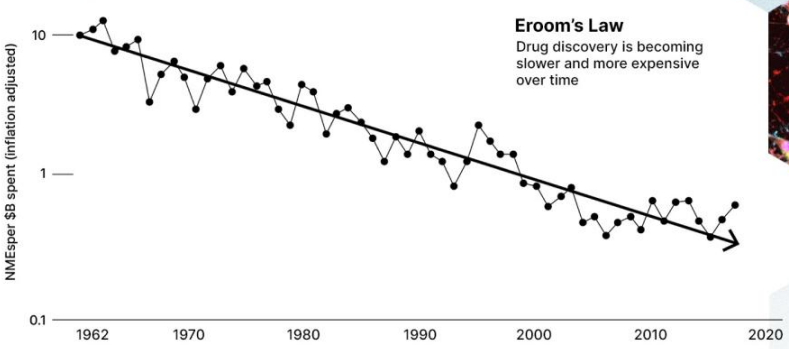
- Pipeline – with 7 clinical trial readouts expected in the next ~18 months
- Partnerships - with potential near term options on both maps and programs
- Platform - with industry-leading data generation and compute

Help define what we view as a tipping point moment as BioTech transitions to TechBio and understand why Recursion is uniquely positioned to take advantage of this

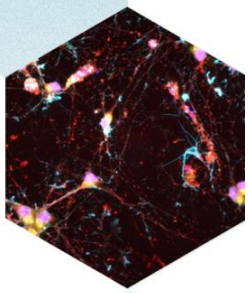
Let you get a feel for Recursion and hear from expert partners from outside Recursion about the current and potential future impact of our work


The Moment: A Tale of Two Cities

A Tale of Two Cities: BioPharma



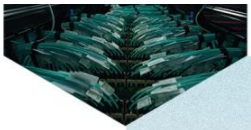
Scannell et al., *Nature Reviews Drug Discovery* 11:191, 2012

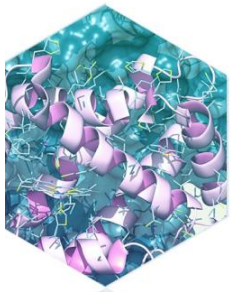


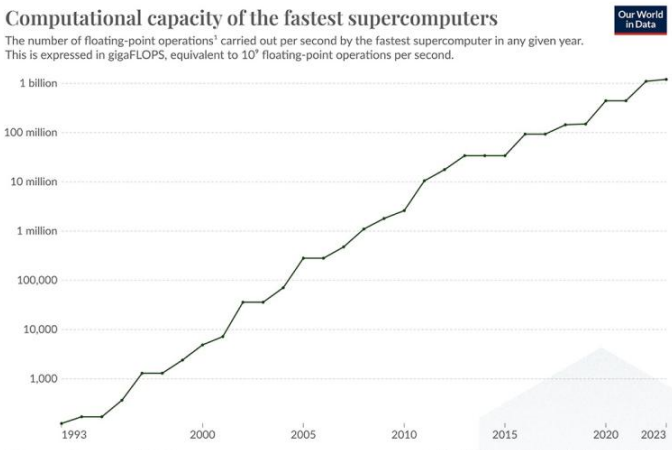
DownloadDay 2024

Recursion

A Tale of Two Cities: Tech







DownloadDay 2024

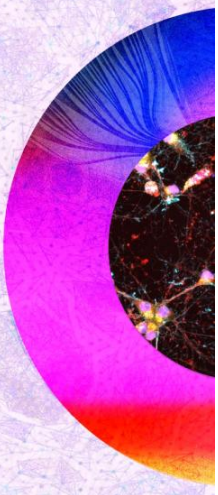
Recursion

The Evolution of BioTech into TechBio

We believe the transformation of BioPharma through AI is inevitable, just as we are seeing in so many industries — we believe it is a matter of who, how and when

New types of companies have emerged that are truly "bilingual" in tech and science

Data, compute, and automation are shifting the speed, cost, and quality of novel insights today, and we are nearing the stage where we can harvest the earliest of this jump forward

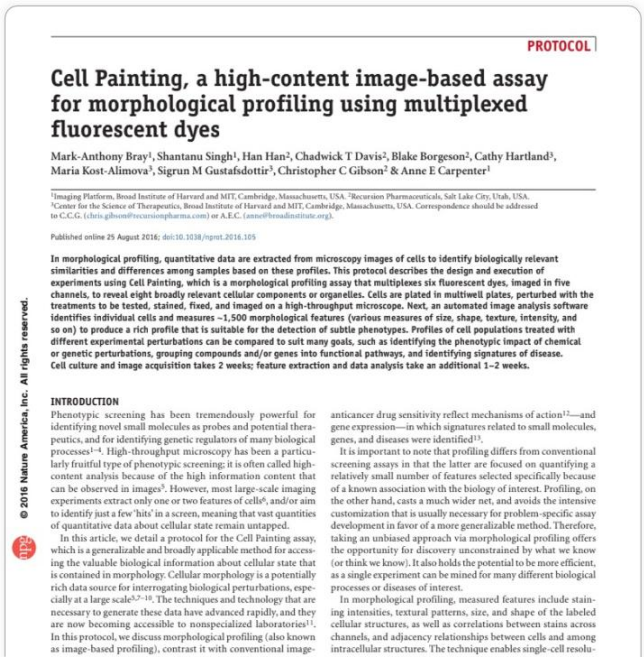


TechBio Origins: Point Solutions

Most BioTech companies have built a point solution - they've developed a tool, process, model or analysis to accomplish an important step in drug discovery.

This is how we started too.

But discovering and developing medicines requires hundreds of steps…



PROTOCOL

Cell Painting, a high-content image-based assay for morphological profiling using multiplexed fluorescent dyes

Mark-Anthony Bray[1], Shantanu Singh[1], Han Han[2], Chadwick T Davis[2], Blake Borgeson[2], Cathy Hartland[3], Maria Kost-Alimova[3], Sigrun M Gustafsdottir[3], Christopher C Gibson[2] & Anne E Carpenter[1]

[1]Imaging Platform, Broad Institute of Harvard and MIT, Cambridge, Massachusetts, USA. [2]Recursion Pharmaceuticals, Salt Lake City, Utah, USA. [3]Center for the Science of Therapeutics, Broad Institute of Harvard and MIT, Cambridge, Massachusetts, USA. Correspondence should be addressed to C.C.G. (chris.gibson@recursionpharma.com) or A.E.C. (anne@broadinstitute.org).

Published online 25 August 2016; doi:10.1038/nprot.2016.105

In morphological profiling, quantitative data are extracted from microscopy images of cells to identify biologically relevant similarities and differences among samples based on these profiles. This protocol describes the design and execution of experiments using Cell Painting, which is a morphological profiling assay that multiplexes six fluorescent dyes, imaged in five channels, to reveal eight broadly relevant cellular components or organelles. Cells are plated in multiwell plates, perturbed with the treatments to be tested, stained, fixed, and imaged on a high-throughput microscope. Next, an automated image analysis software identifies individual cells and measures ~1,500 morphological features (various measures of size, shape, texture, intensity, and so on) to produce a rich profile that is suitable for the detection of subtle phenotypes. Profiles of cell populations treated with different experimental perturbations can be compared to suit many goals, such as identifying the phenotypic impact of chemical or genetic perturbations, grouping compounds and/or genes into functional pathways, and identifying signatures of disease. Cell culture and image acquisition takes 2 weeks; feature extraction and data analysis take an additional 1–2 weeks.

INTRODUCTION

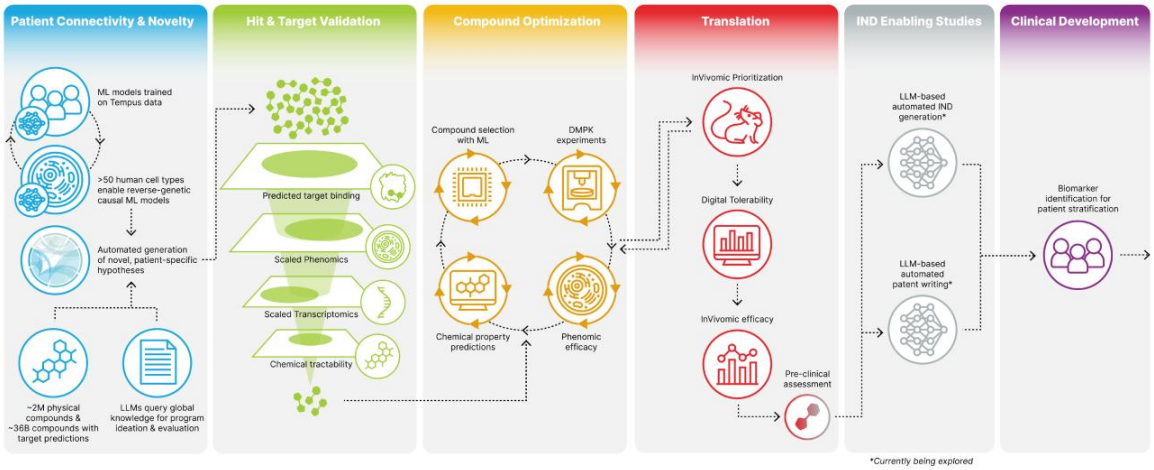
Phenotypic screening has been tremendously powerful for identifying novel small molecules as probes and potential therapeutics, and for identifying genetic regulators of many biological processes[1–4]. High-throughput microscopy has been a particularly fruitful type of phenotypic screening; it is often called high-content analysis because of the high information content that can be observed in images[5]. However, most large-scale imaging experiments extract only one or two features of cells[6], and/or aim to identify just a few 'hits' in a screen, meaning that vast quantities of quantitative data about cellular state remain untapped.

In this article, we detail a protocol for the Cell Painting assay, which is a generalizable and broadly applicable method for accessing the valuable biological information about cellular state that is contained in morphology. Cellular morphology is a potentially rich data source for interrogating biological perturbations, especially at a large scale[5,7–10]. The techniques and technology that are necessary to generate these data have advanced rapidly, and they are now becoming accessible to nonspecialized laboratories[11]. In this protocol, we discuss morphological profiling (also known as image-based profiling), contrast it with conventional image-anticancer drug sensitivity reflect mechanisms of action[12]—and gene expression—in which signatures related to small molecules, genes, and diseases were identified[13].

It is important to note that profiling differs from conventional screening assays in that the latter are focused on quantifying a relatively small number of features selected specifically because of a known association with the biology of interest. Profiling, on the other hand, casts a much wider net, and avoids the intensive customization that is usually necessary for problem-specific assay development in favor of a more generalizable method. Therefore, taking an unbiased approach via morphological profiling offers the opportunity for discovery unconstrained by what we know (or think we know). It also holds the potential to be more efficient, as a single experiment can be mined for many different biological processes or diseases of interest.

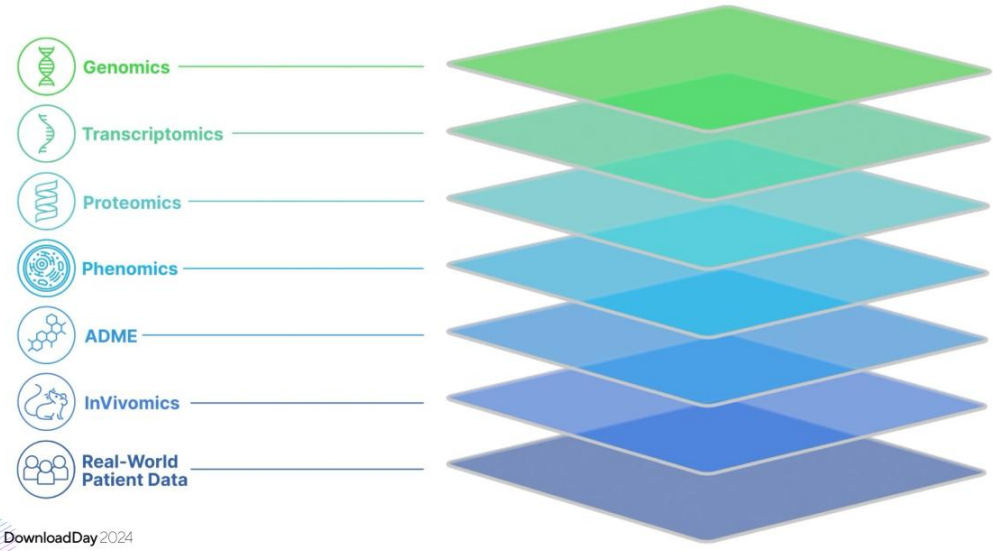
In morphological profiling, measured features include staining intensities, textural patterns, size, and shape of the labeled cellular structures, as well as correlations between stains across channels, and adjacency relationships between cells and among intracellular structures. The technique enables single-cell resolu-

To truly industrialize drug discovery, point solutions must be integrated as modules across many diverse steps

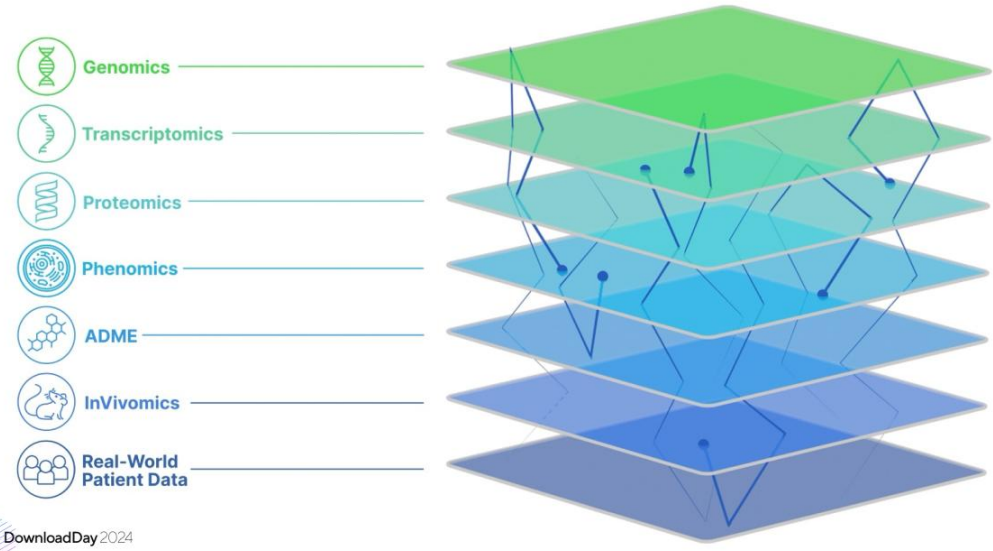



LOWE

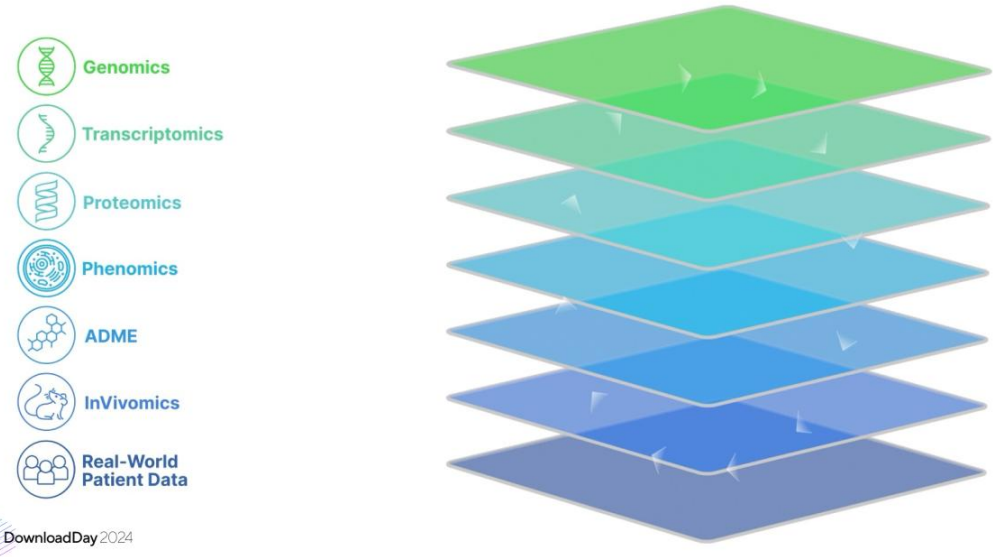
Connecting data layers to build digital maps of biology



Connecting data layers to build digital maps of biology

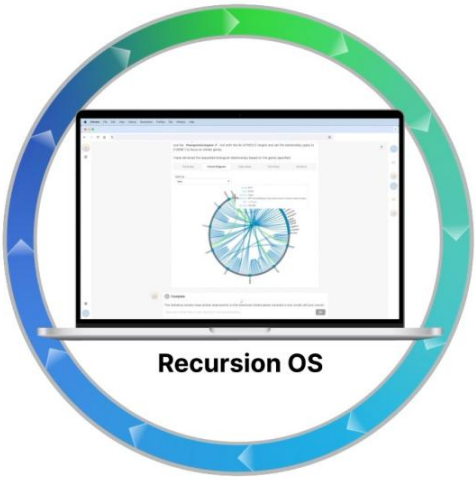


Connecting data layers to build digital maps of biology



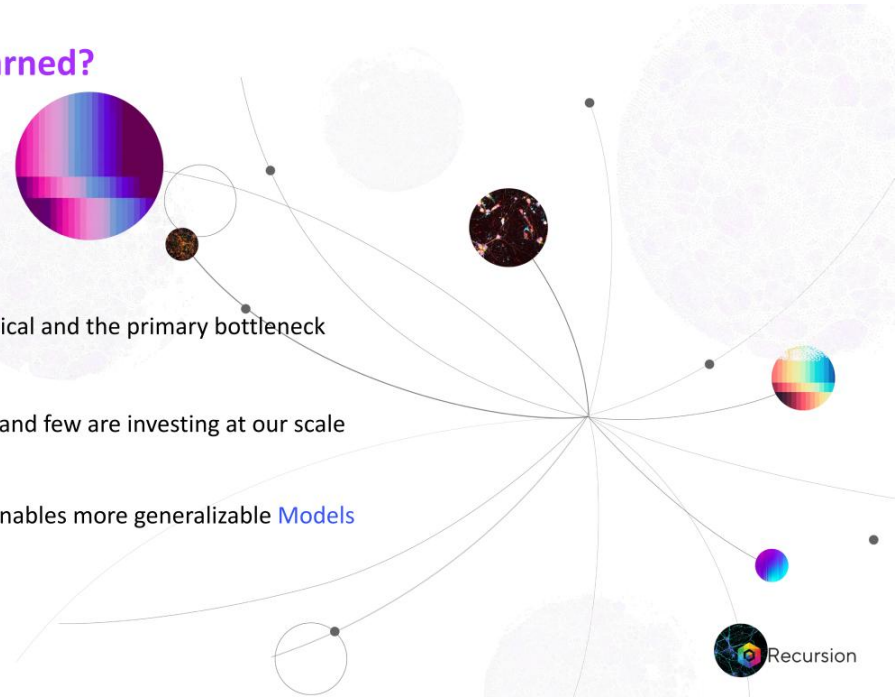
Connecting data layers to build digital maps of biology

- Genomics
- Transcriptomics
- Proteomics
- Phenomics
- ADME
- InVivomics
- Real-World Patient Data



Where are we right now?

What have we learned?



Fit for Purpose Data is Critical and the primary bottleneck

More Compute is needed and few are investing at our scale

More data and compute enables more generalizable Models

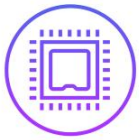
Industrializing stages of our drug discovery efforts leads to massive efficiency improvements

2022 Pre-Industrialization		2023 Post-Industrialization		Half of 2024 Continued Improvement
Team of 40 people	→	Team of 7 people	→	~1 FTE equivalent
30 program hypotheses explored	→	115 program hypotheses explored	→	201 program hypotheses *initiated*

Four ingredients needed to continue leading TechBio at the tipping point

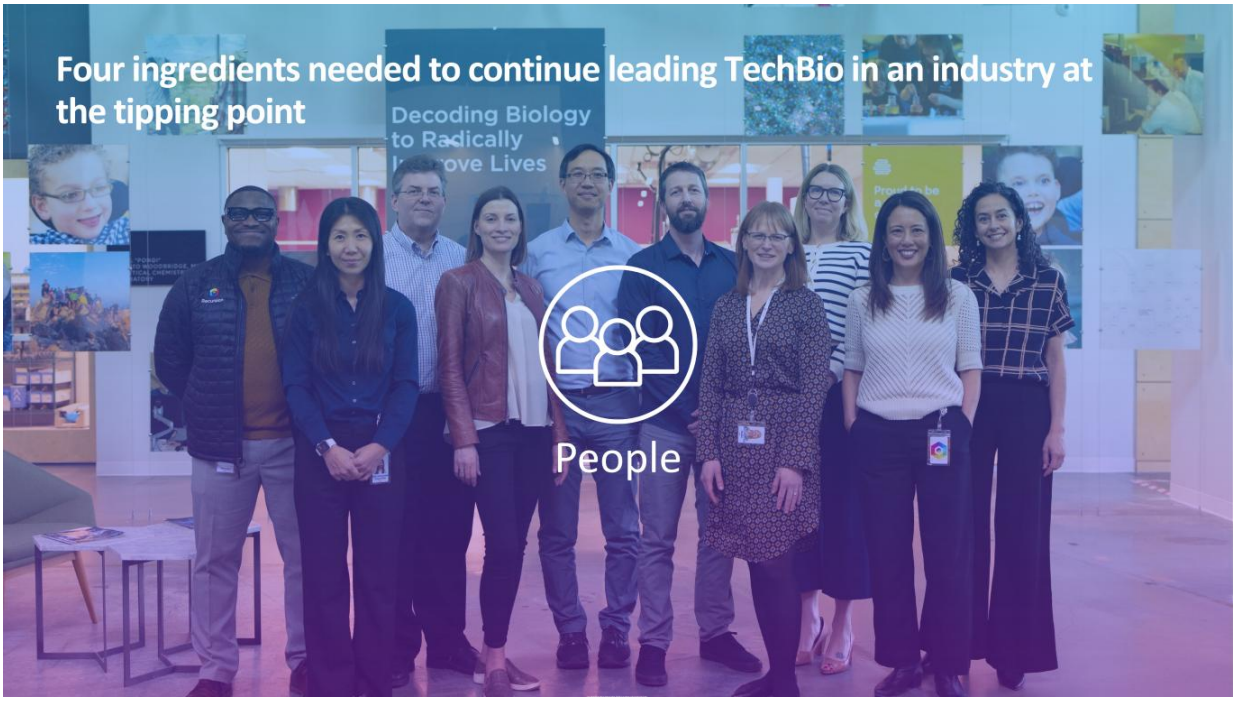
People

Data

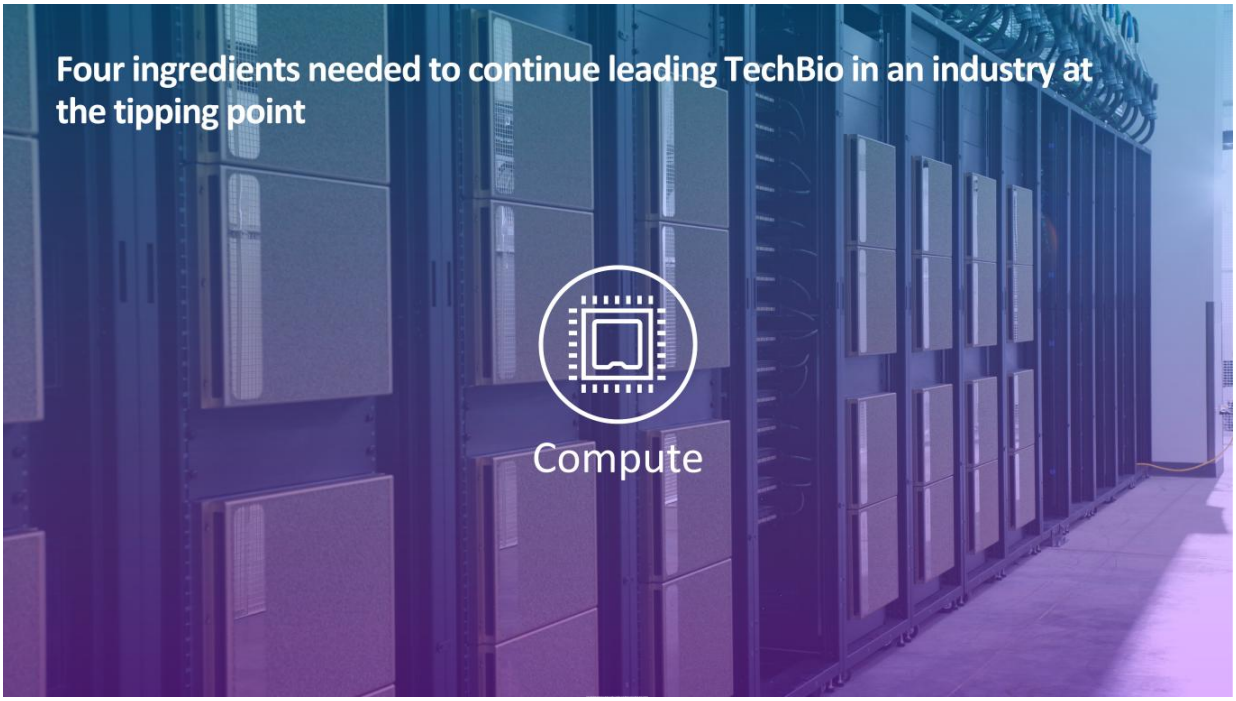


Compute

Capital


Four ingredients needed to continue leading TechBio in an industry at the tipping point
Decoding Biology to Radically
People


Four ingredients needed to continue leading TechBio in an industry at the tipping point
Data


Four ingredients needed to continue leading TechBio in an industry at the tipping point
Compute

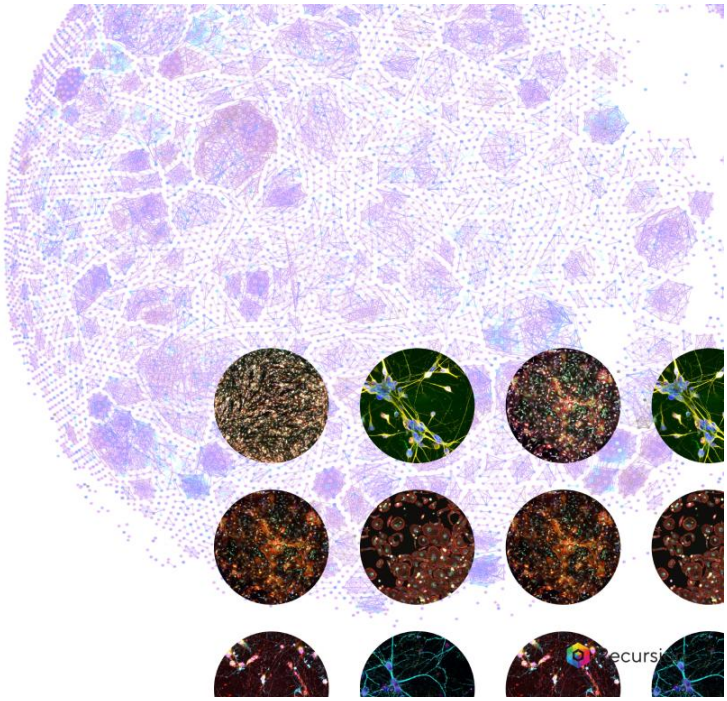

Four ingredients needed to continue leading TechBio in an industry at the tipping point
Capital
Nasdaq
RXRX
Nasdaq Listed

Our Purpose

We exist to run an experiment...

....An experiment to determine if there might be a better way to discover and develop drugs...

...We need this sort of ambition in BioTech if we hope to have a chance of transforming our ability to impact patients and drive down the cost of medicines.



What to Expect from Recursion in the Near Term

Pipeline

- 7 clinical trial readouts expect over the next ~18 months with new programs embracing our tools to drive novel chemistry against novel targets advancing quickly

Partnership

- Roche & Genentech: program optioned in oncology continues to progress with potential additional near-term program & very near-term map options
- Bayer: On track to complete 25 unique multi-modal data packages in Q3 2024 with first joint Project now advancing rapidly towards Lead Series nomination

Platform

- Internal programs now initiated by LLM with multiple hit nominations for LLM-generated programs with more on the way
- Moving towards large-scale multi-omics and generalizable foundation models with first genome-scale transcriptomics map and patient data
- Data and tools available to biopharma and commercial users: Bayer will be 1st beta-user of LOWE for drug discovery and development


Recursion
The Recursion Operating System
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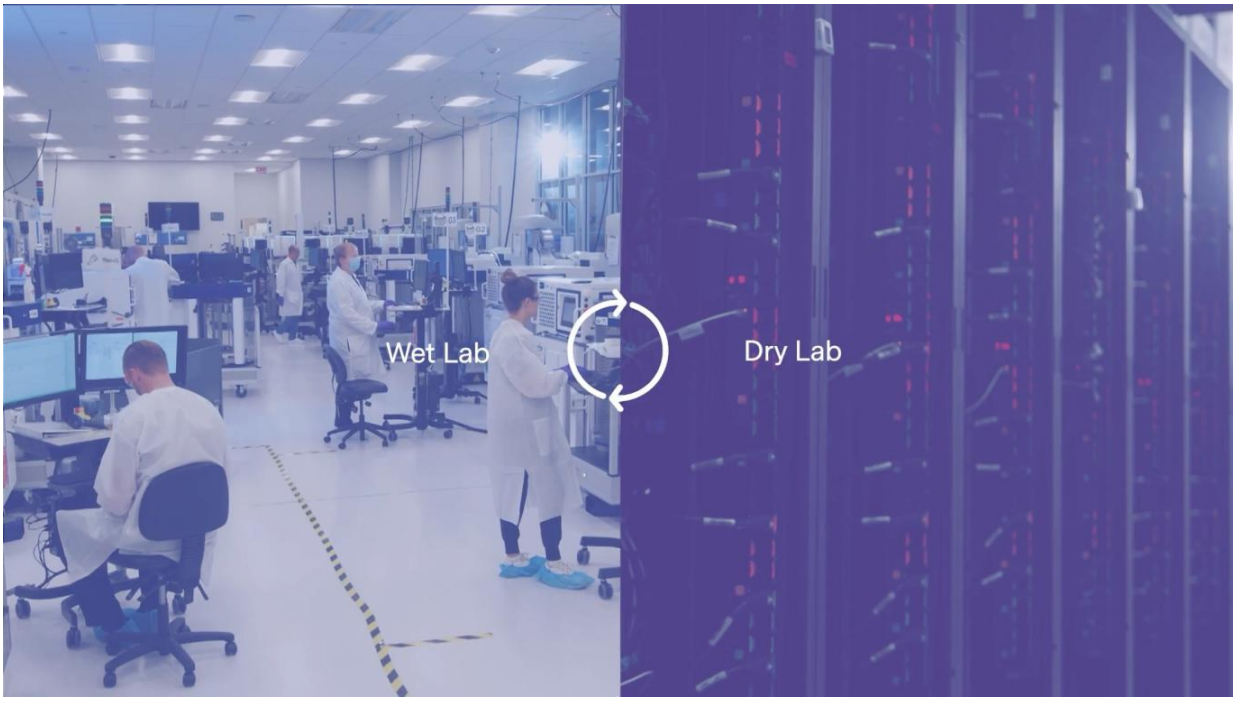
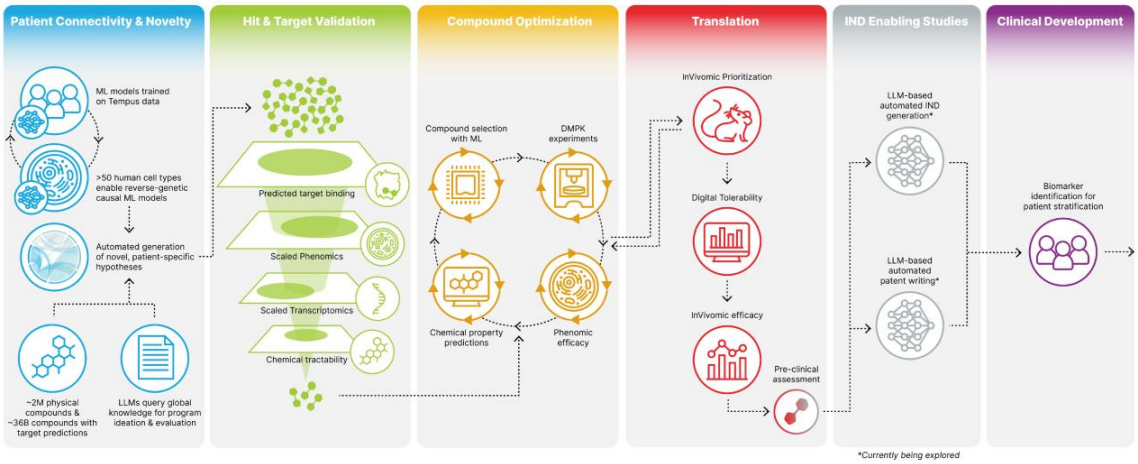
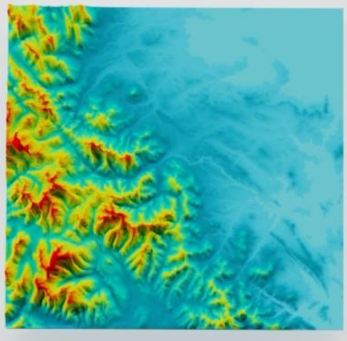
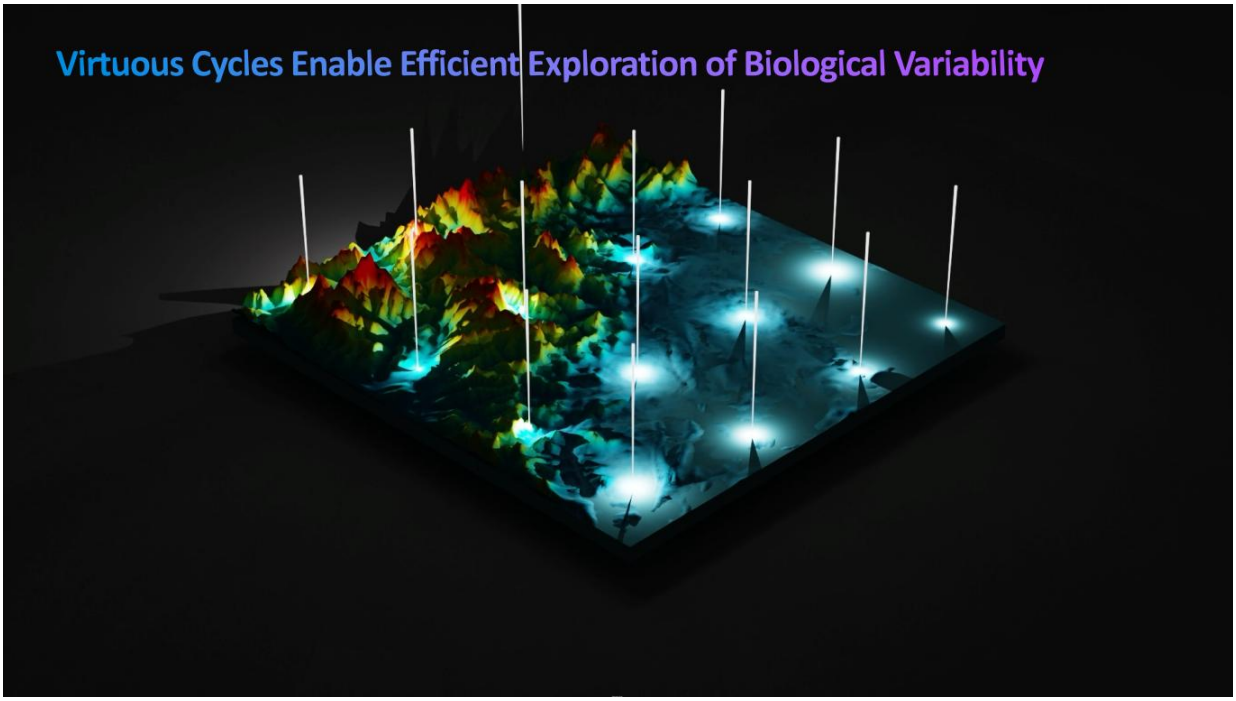

Wet Lab
Dry Lab

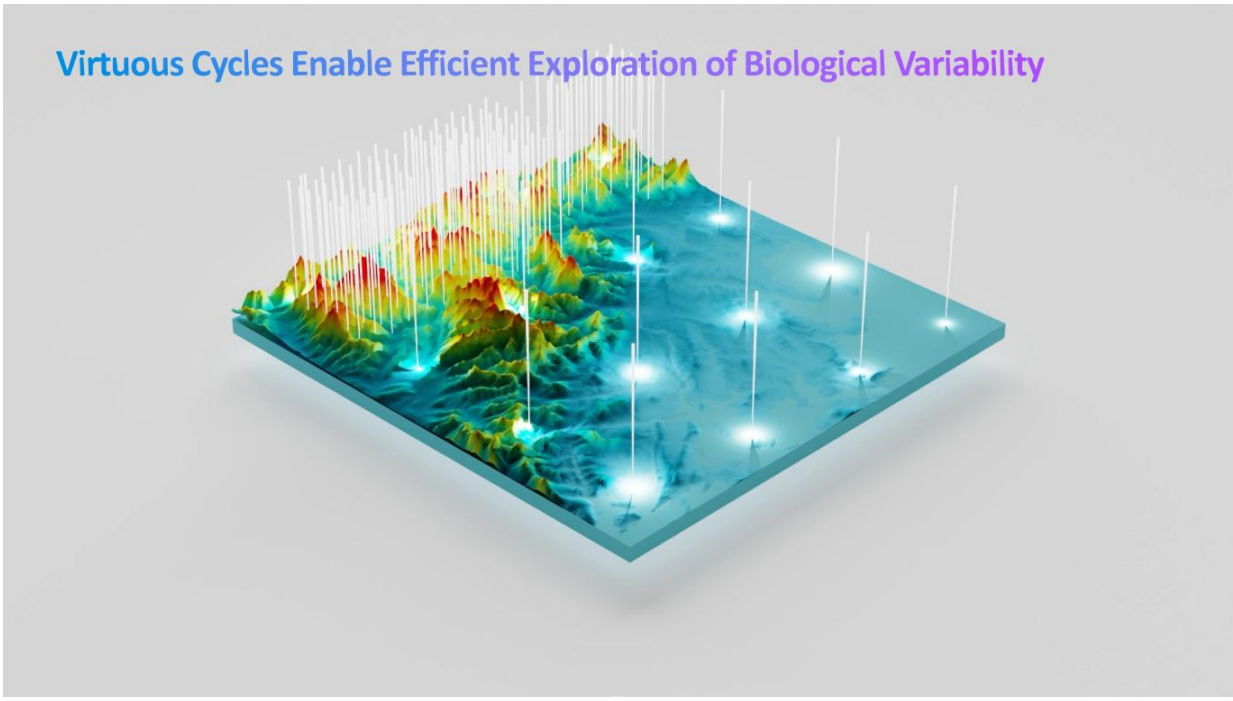
Virtuous Cycles Connect Systems for Efficient End-to-End Drug Discovery

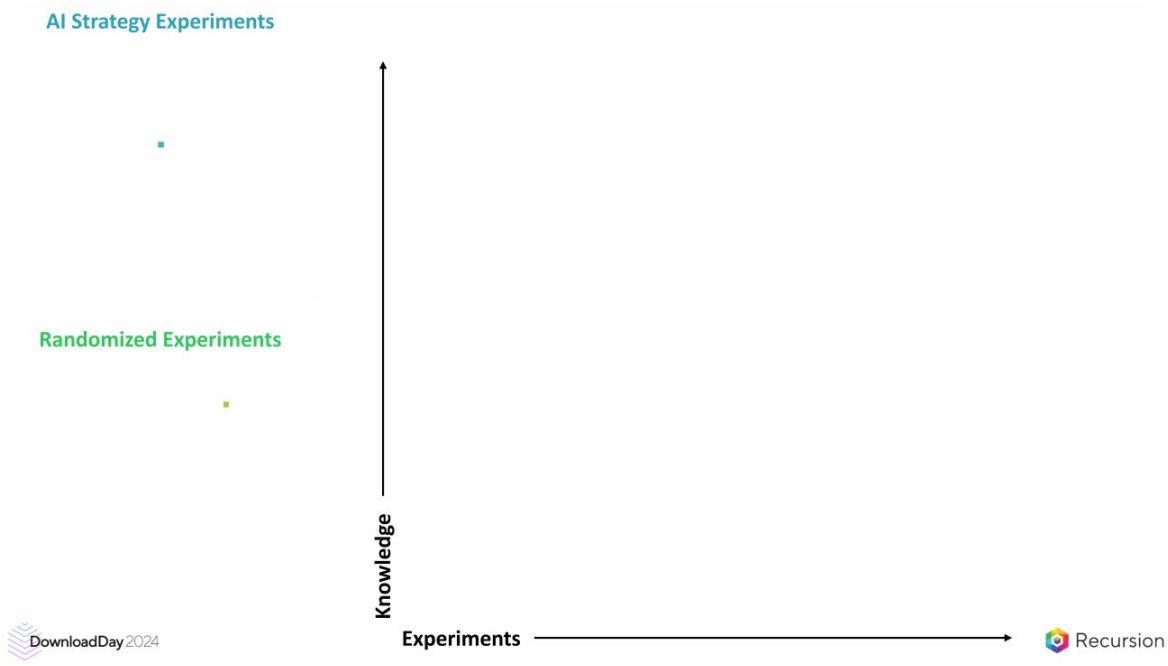


Virtuous Cycles Enable Efficient Exploration of Biological Variability

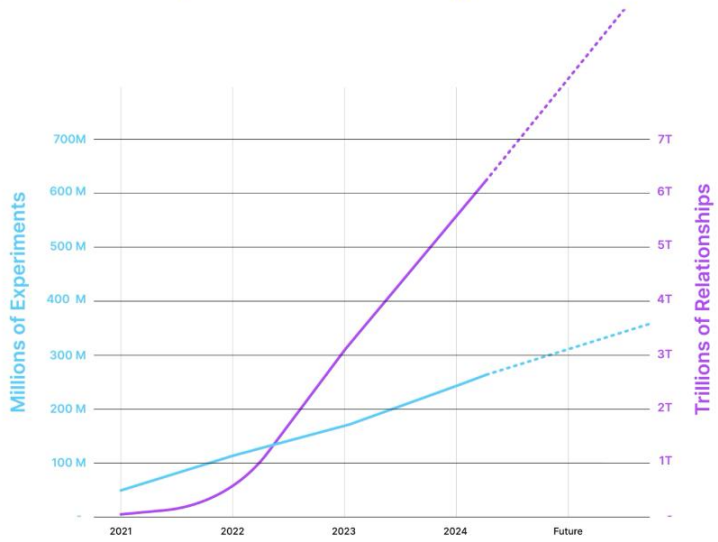



Virtuous Cycles Enable Efficient Exploration of Biological Variability


Virtuous Cycles Enable Efficient Exploration of Biological Variability


AI Strategy Experiments
Randomized Experiments
Knowledge
Experiments
DownloadDay 2024
Recursion

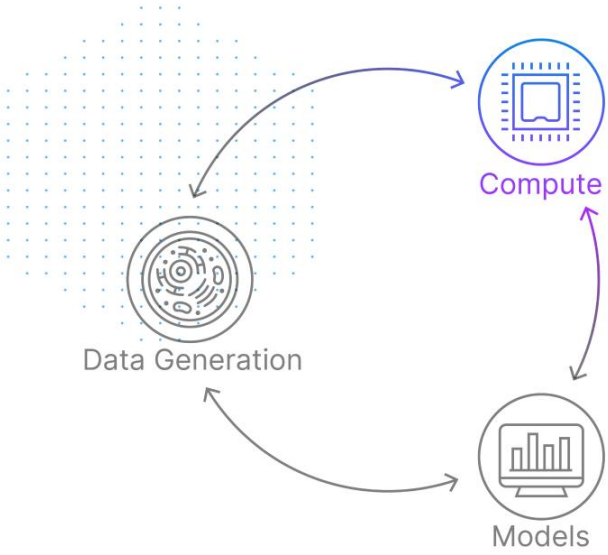
Virtuous Cycles Drive Superlinear Knowledge Creation




Compute
Data generation
Models

Recursion

Compute



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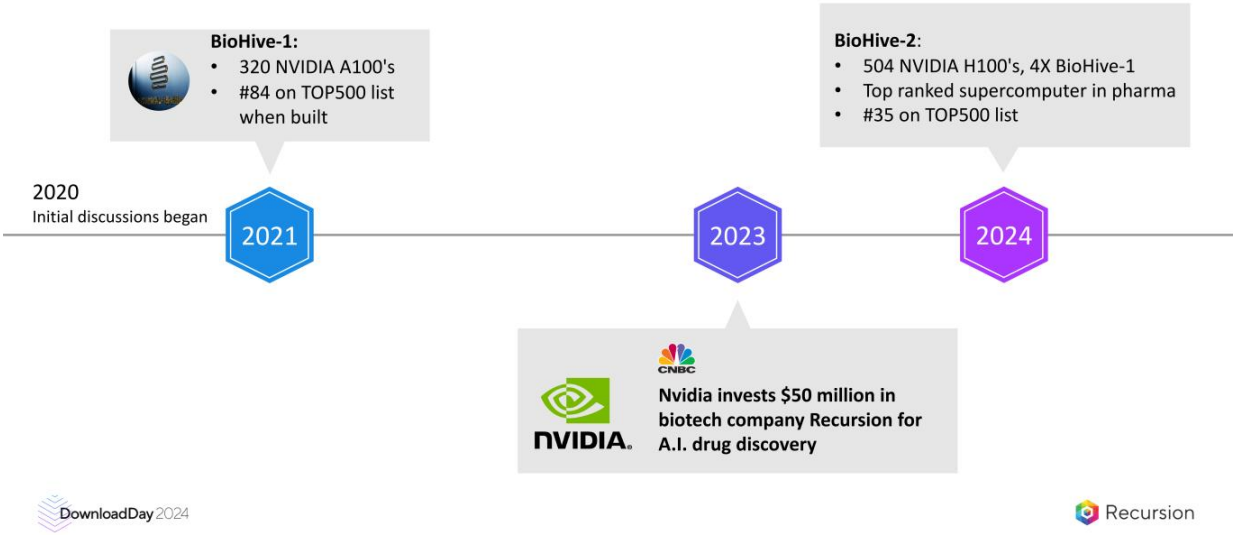
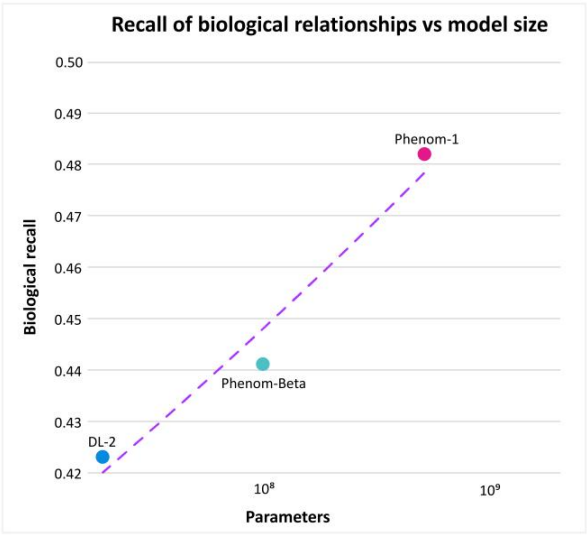
Ahead of the curve: our supercomputer journey



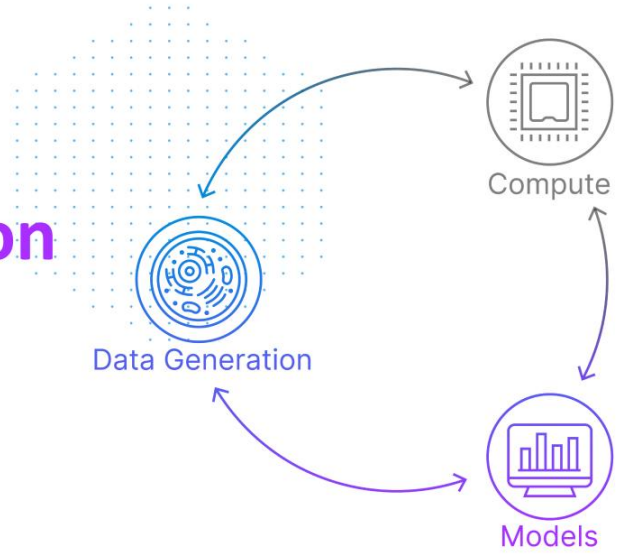
Larger datasets and Increased Computation Yield Superior Models



35th fastest supercomputer in the world!

Recursion

Data Generation and Models



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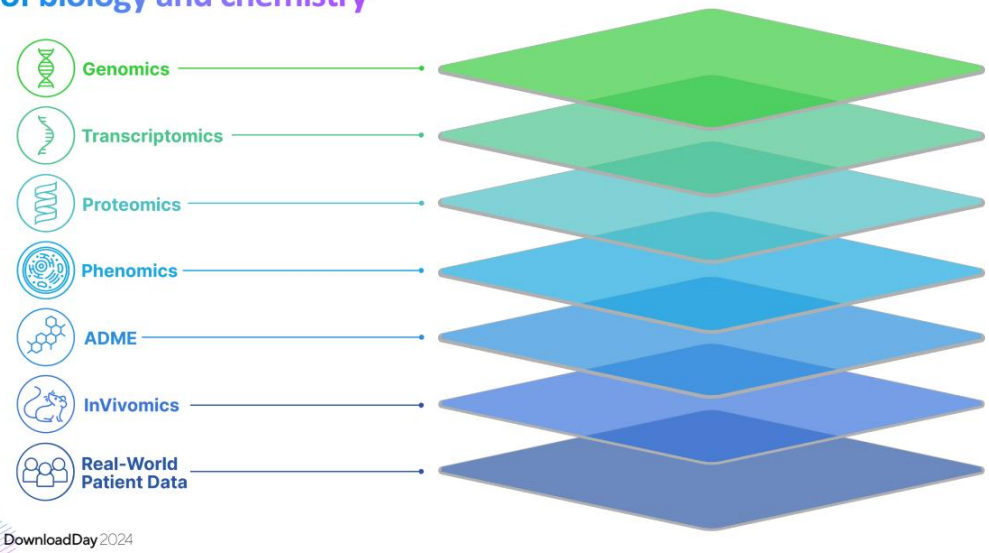
Standardizing and automating experiments to capture multiple layers of biology and chemistry



Phenomics: Foundation models improve at detecting biology

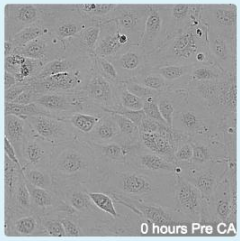
DATA GENERATION

>250 million experiments

>50 human cell types

>1 trillion neurons generated

Brightfield to capture dynamics

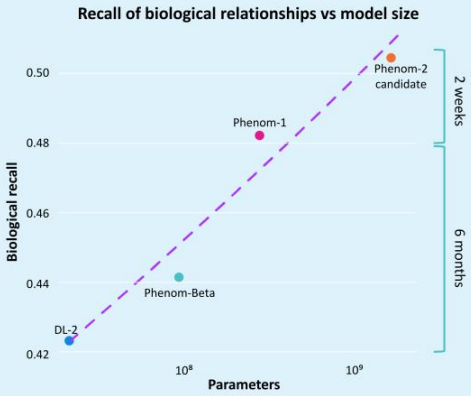


MODELS

2 weeks of rapid iteration on Biohive-2 enabled

25.7%

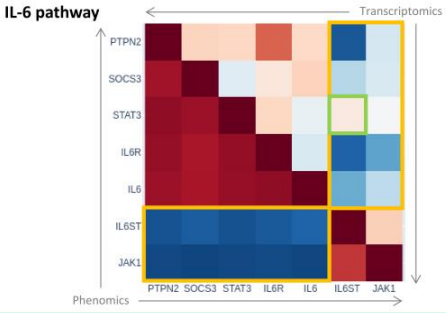
increase in expressed gene knock-outs detected



Transcriptomics: Multimodal data scales validation and mapping

DATA GENERATION

>1M samples sequenced
First genome-scale transcriptomic map



MODELS

Replaced time-consuming, disease-specific validation assays with portfolio-wide **multimodal model** workflow

90%

Ability to predict compounds that *failed* later disease-relevant assays in internal tests

60%

Ability to predict compounds that *passed* later disease-relevant assays in internal tests

ADME: Data and scale lead to State of the Art models

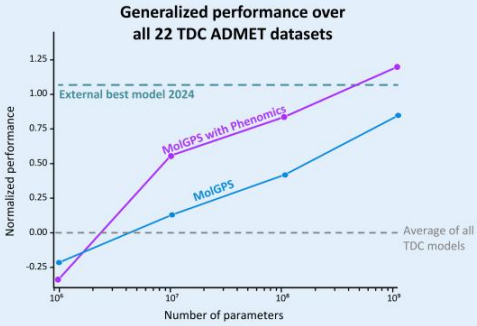
DATA GENERATION

Estimated **90x** throughput over manual approach

>750 compounds per week

MODELS

Our single generalizable model improves with multimodal data and model size



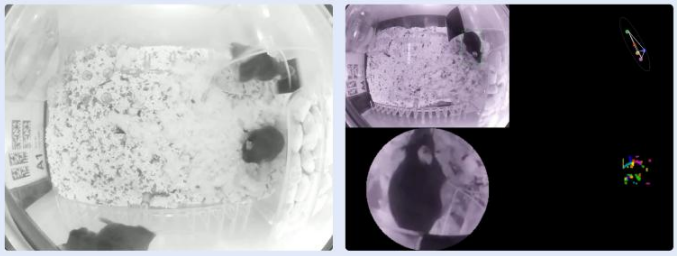
InVivomics accelerates decision-making in late discovery

DATA GENERATION

>1,000 digital mouse cages

150 digital **rat cages** in 2024

Social housing increases relevance



MODELS

- Machine learning enables scale by extracting signals from video and temperature sensors
- Applied across breadth of Recursion portfolio
- Designed to select the right molecule at the right dose before entering studies

Patient Data: Path to uncover novel disease drivers with Maps

DATA GENERATION

TEMPUS

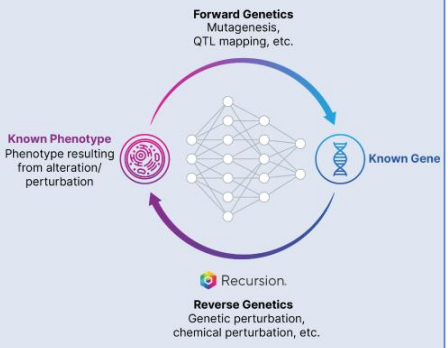
>20 PB of real-world multi-modal oncology data

Helix

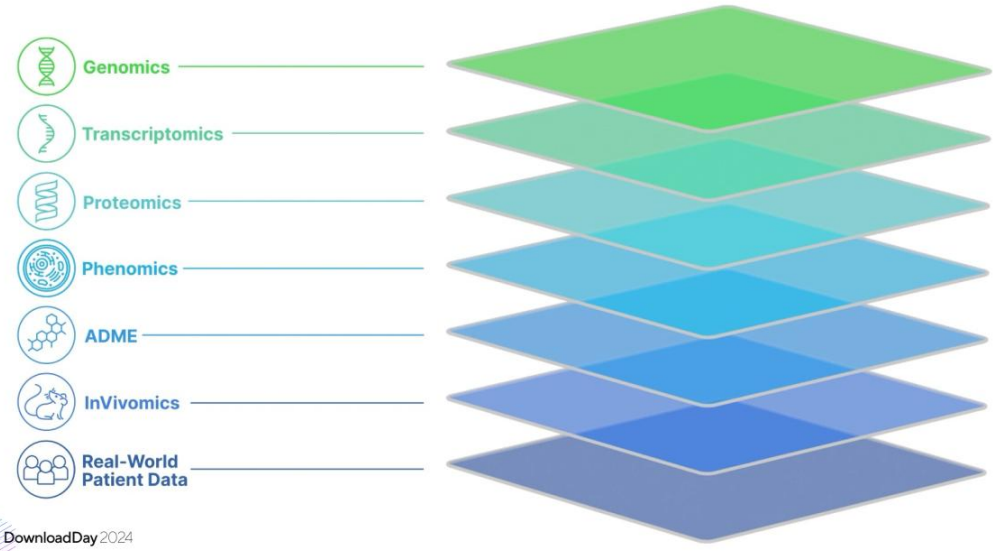
Hundreds of thousands of unique de-identified patient records across diverse therapeutic areas

MODELS

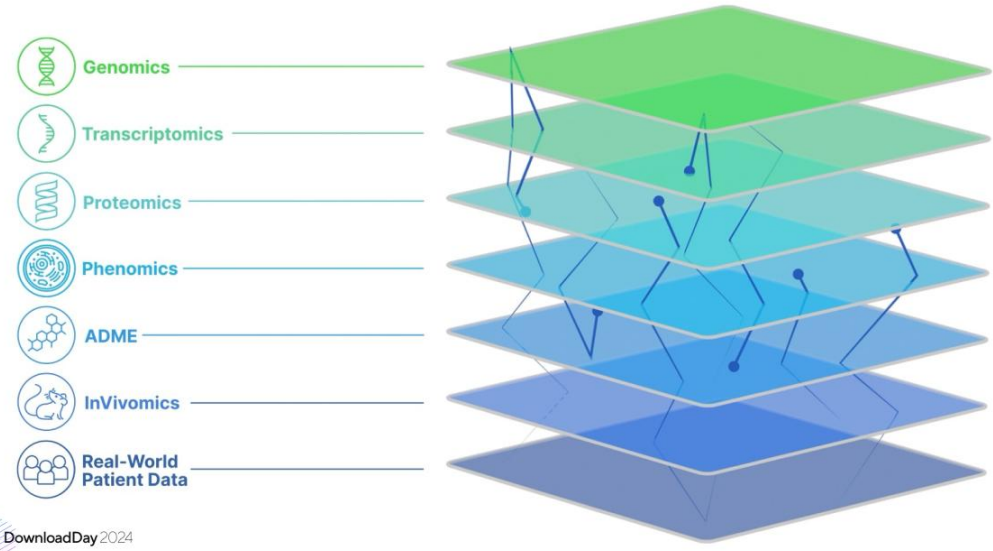
Combining Recursion maps of biology with patient clinical data unlocks causal modeling to find novel targets



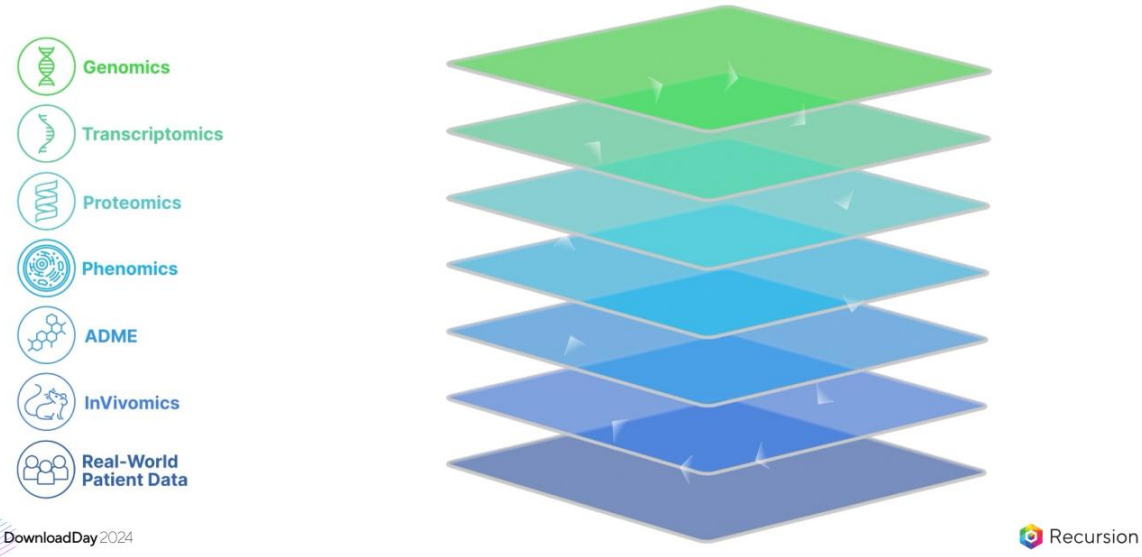
Connecting data layers to build digital maps of biology



Connecting data layers to build digital maps of biology

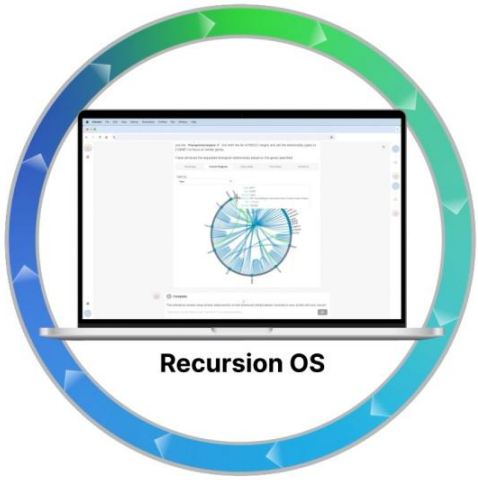


Connecting data layers to build digital maps of biology



Connecting data layers to build digital maps of biology

- Genomics
- Transcriptomics
- Proteomics
- Phenomics
- ADME
- InVivomics
- Real-World Patient Data



Recursion

Utility of the OS

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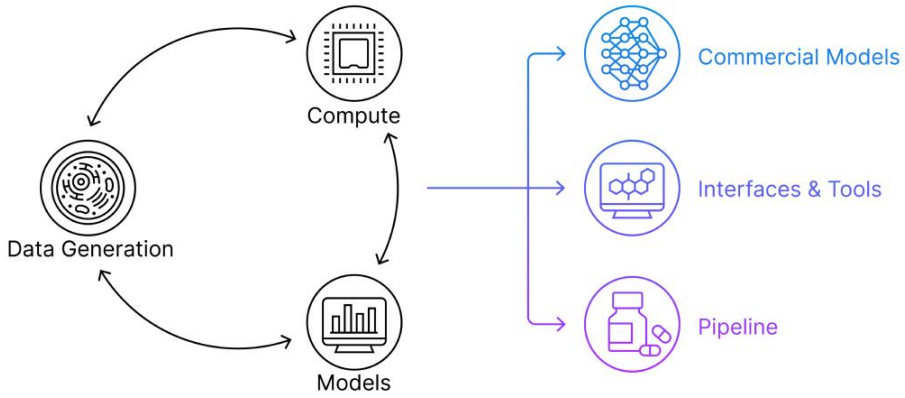
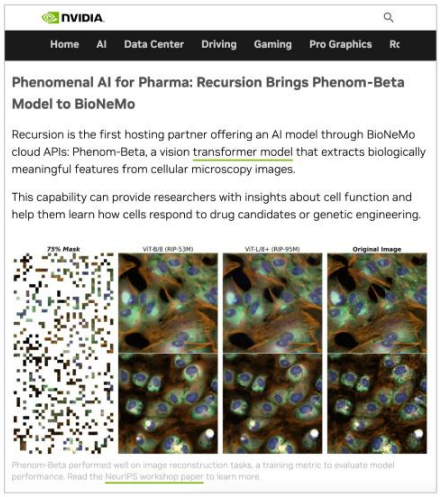
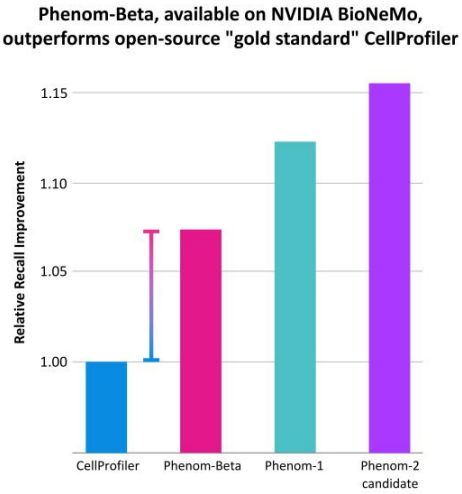
The Recursion OS: Utility across multiple potential product verticals



Commercial Models: Capitalizing on our data and foundation models






Interfaces and Tools: bringing together modules spanning the drug discovery process
Phenomics
Compound selection with ML
Patient-specific hypotheses
Phenom-1
Chemical tractability
InVivomic prioritization
LLMs & literature search
InVivomic efficacy
Chemical property predictions
Predicted target binding
Tempus data ML models
Phenomic efficacy
Patient stratification
Transcriptomics
MatchMaker
Digital tolerability
DMPK
Compound ordering
DownloadDay 2024
Recursion

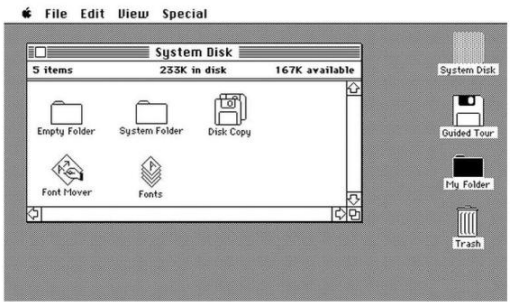

LOWE

The Future of TechBio

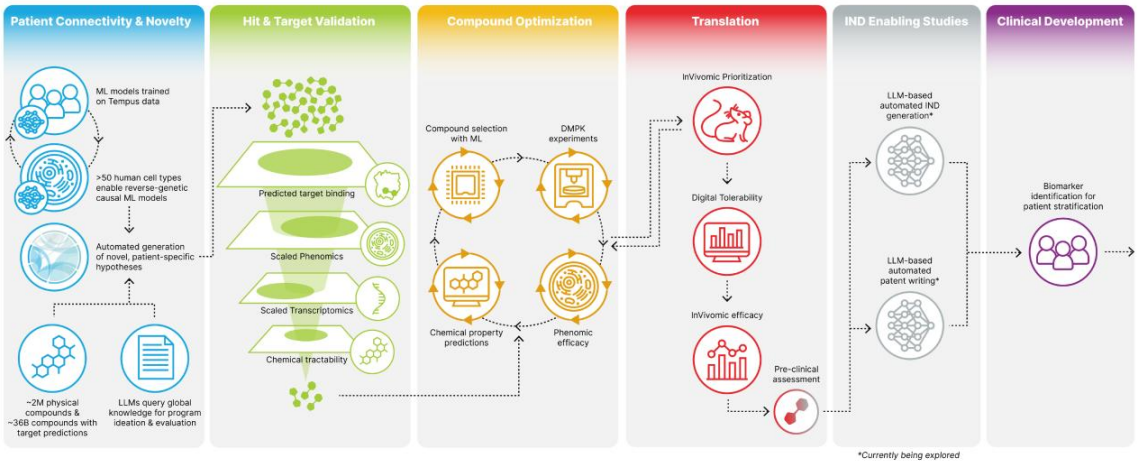
Turning drug discovery into a search problem

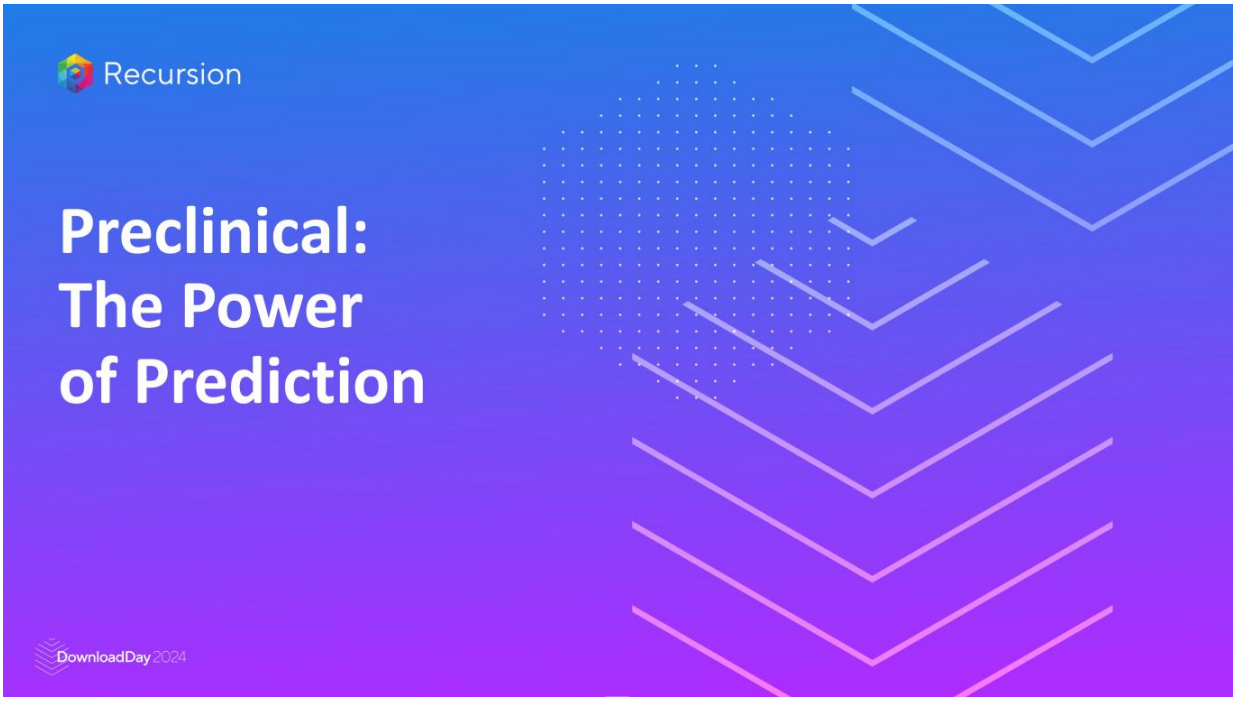
The Future of TechBio

Turning drug discovery into a search problem



Pipeline: connecting systems into Industrialized Workflows




Recursion
Preclinical:
The Power
of Prediction
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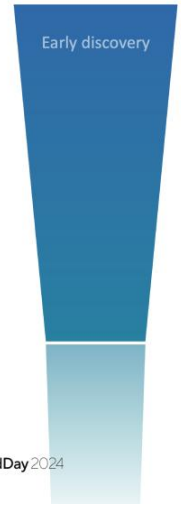
Traditional approach to initiating a new drug discovery program



Novel opportunity

↓

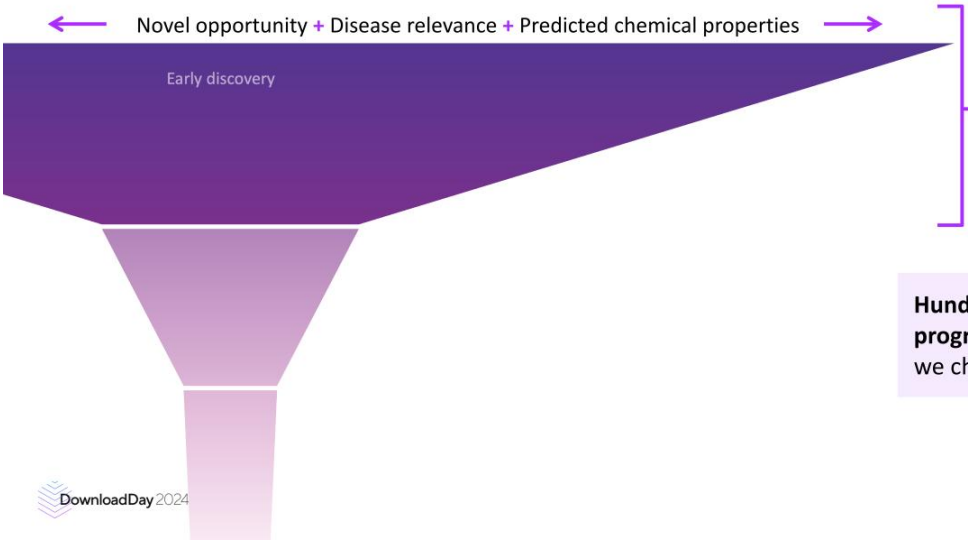
Disease relevance

1-2 **years**

Millions of $

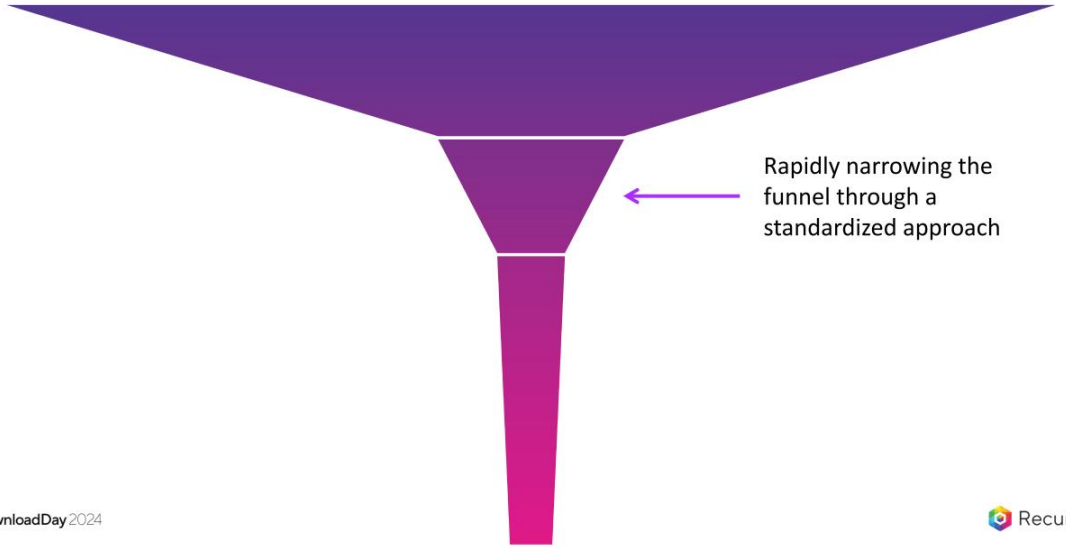
~One potential program

We are turning this into a search problem, evaluating new programs in bulk

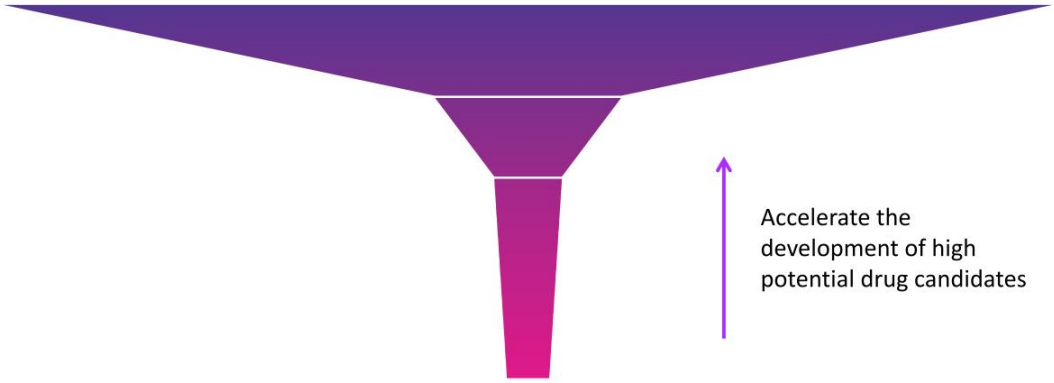


Hundreds of potential programs evaluated, we choose the best

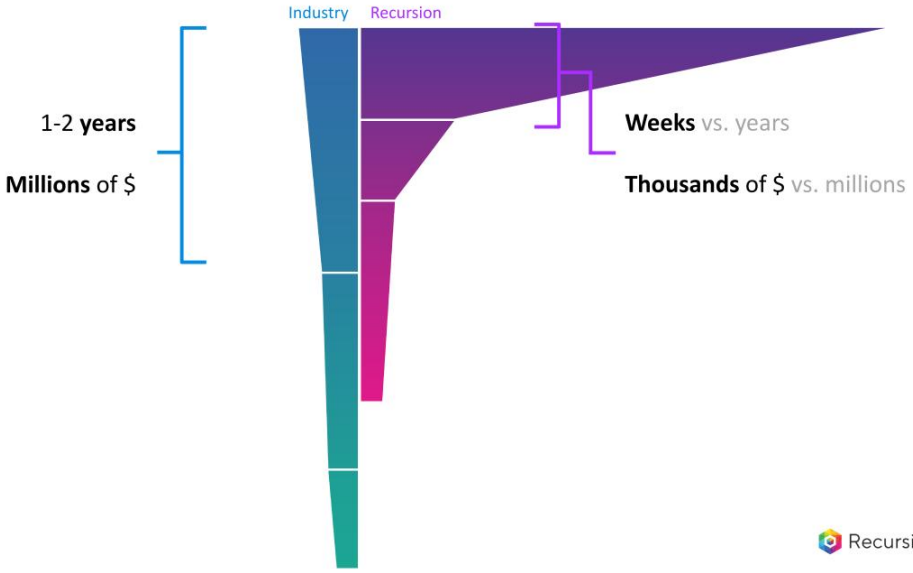
Recursion is designed to impact drug discovery productivity…



Recursion is designed to impact drug discovery productivity…



Reshaping the timelines and shape of drug discovery research



Recursion

Case Study: Target Epsilon

Identifying novel targets and optimizing novel chemistry

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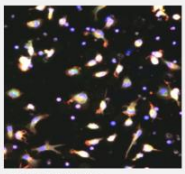
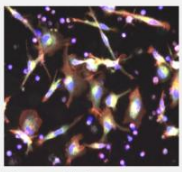
Power of Phenomics: Identify complex phenotypic rescue at scale

PBMC-derived fibrocyte assay



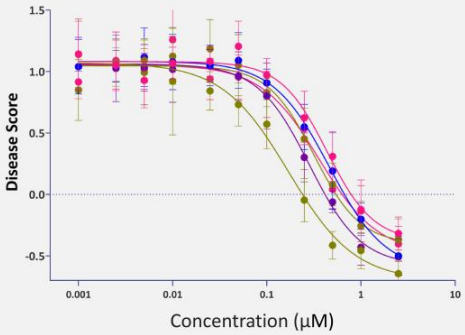
Control State:
10 µg/mL control peptide



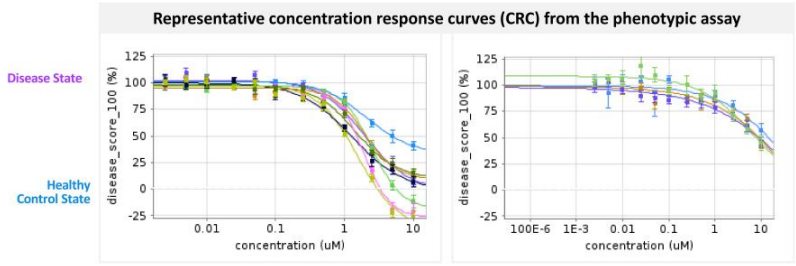
Disease State:
Undisclosed treatment

- Human-PBMCs are differentiated to fibrocytes
- Treatment with a control peptide gives desired impact on fibrocytes (**control state)**

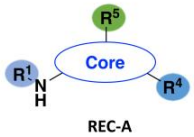
Promising hits from phenotypic screen



~100x potency gains driven entirely on phenomics assay

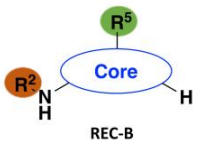


Significant reduction of disease modifying activity



REC-A

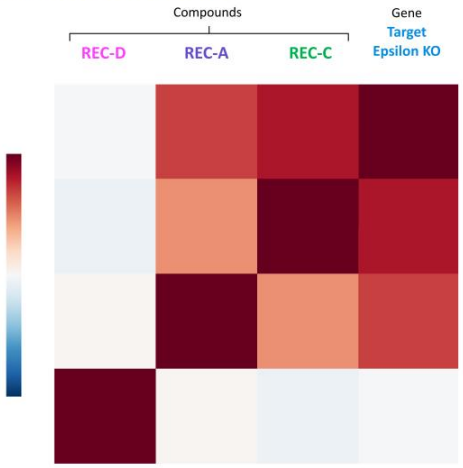
50% Rescue 1.5 µM

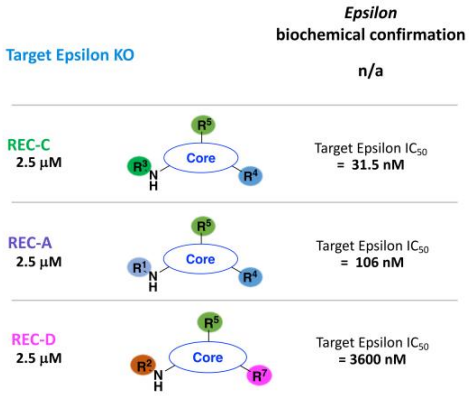


REC-B

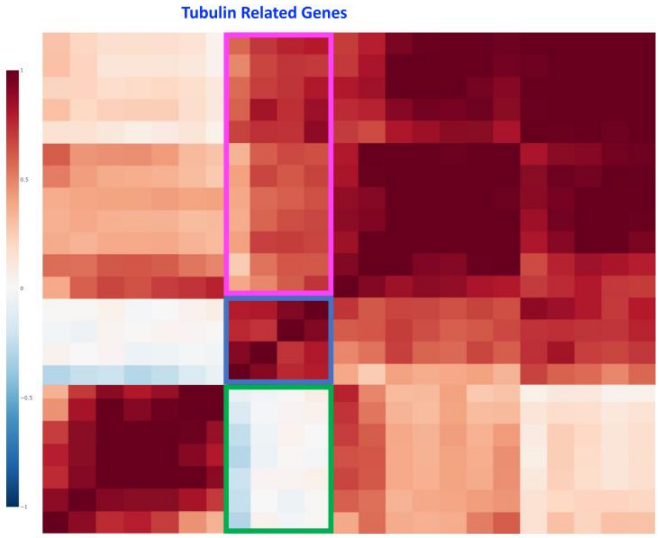
50% Rescue ~10 µM

Phenomics identified mechanism of action as a novel approach for treating fibrosis

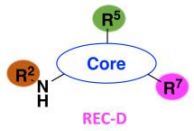




Power of Phenomics: Track and minimize off-target liabilities



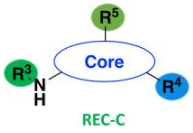
Compounds with
<10 µM tubulin IC_{50}



REC-D

Phenomap correlates with tubulin polymerization inhibition assay

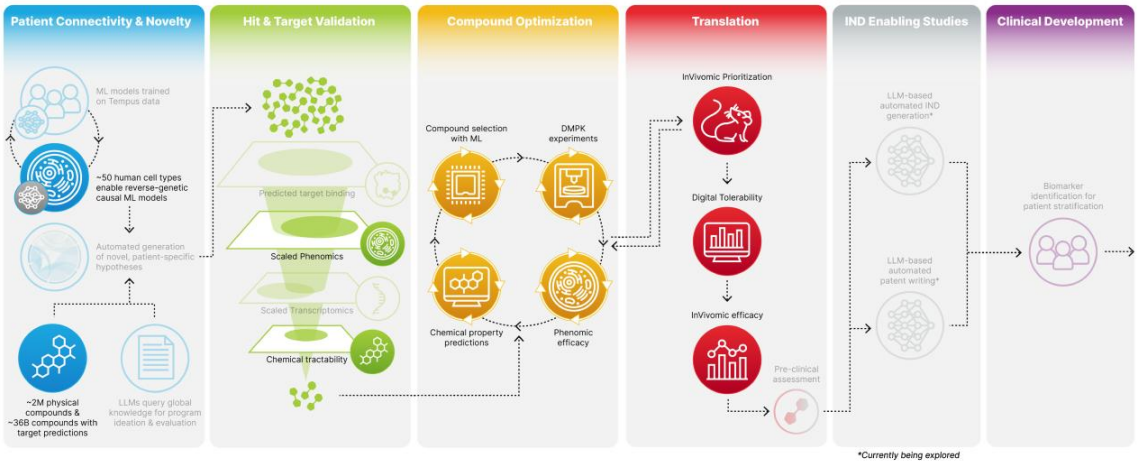
Tubulin Related Genes



REC-C

Compounds with
>30 µM tubulin IC_{50}

Industrialized Drug Discovery: Optimizing novel chemical matter



Recursion

Case Study: RBM39

Accelerating to IND enabling studies through in silico novel target prediction

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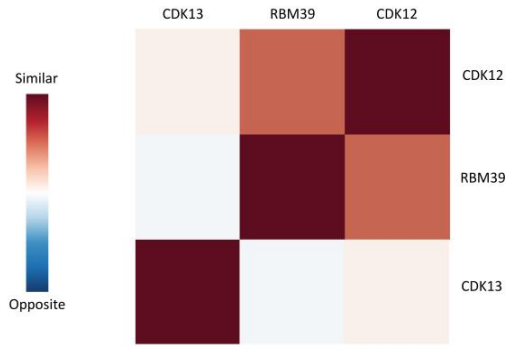
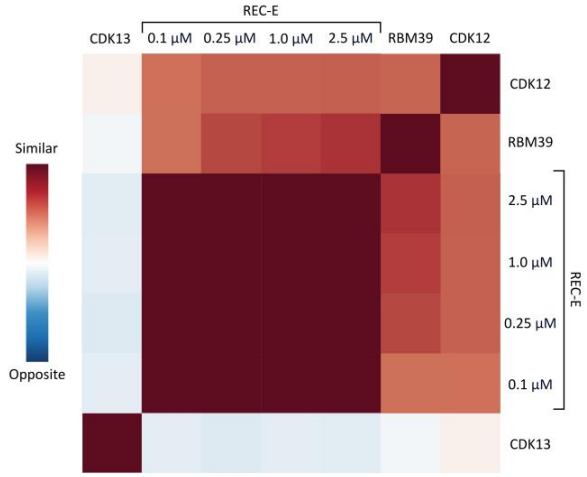
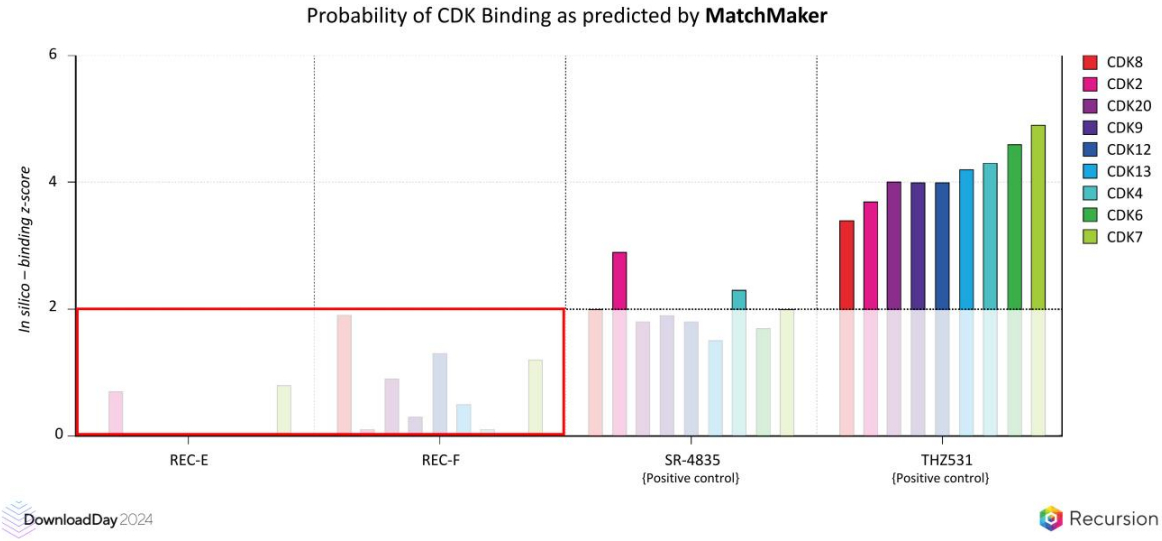
Inference search reveals novel CDK12 adjacent target RBM39 and selective small molecule hits



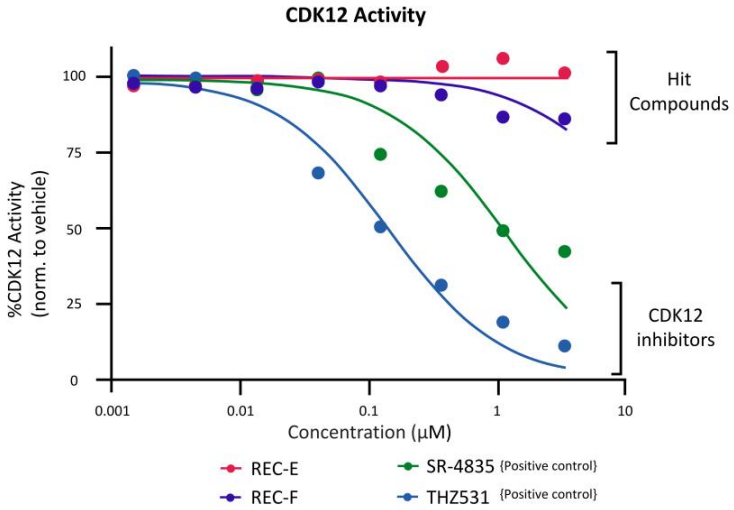
Inference search reveals novel CDK12 adjacent target RBM39 and selective small molecule hits



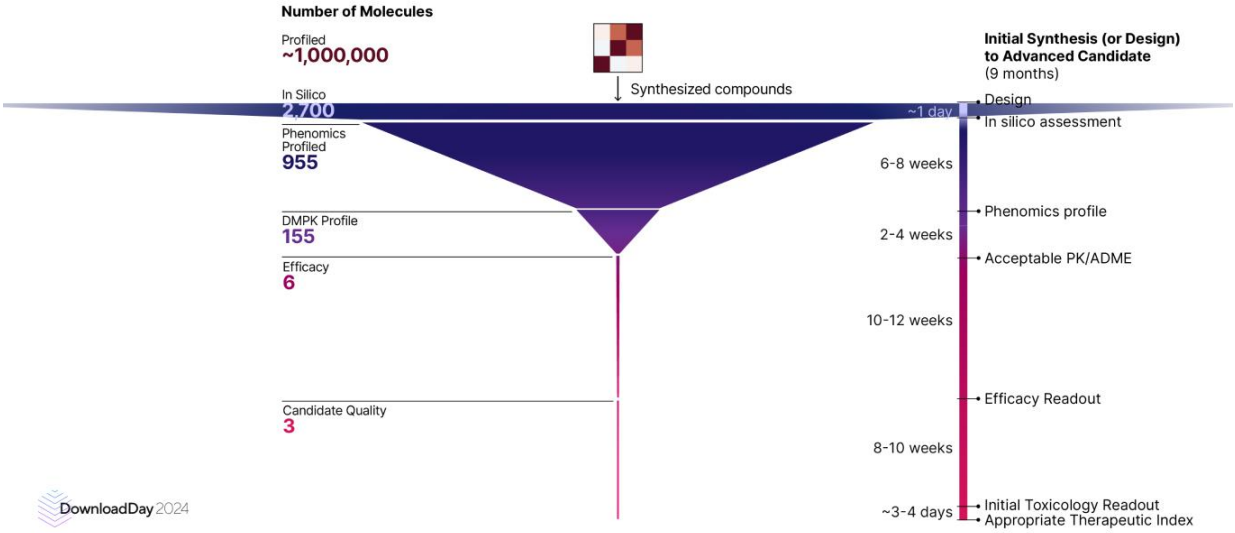
In silico MatchMaker predicts hit compounds are NOT CDK inhibitors



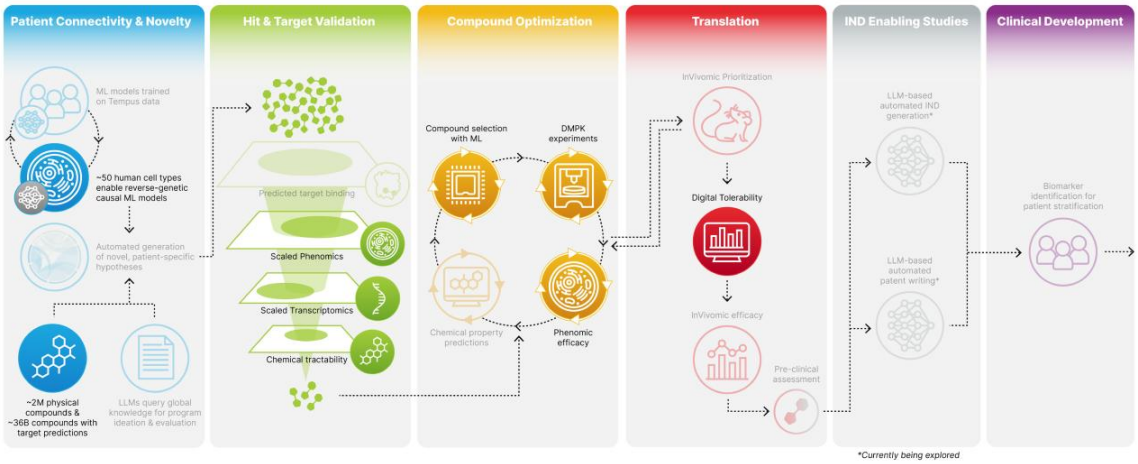
Physical data confirms digital hypothesis



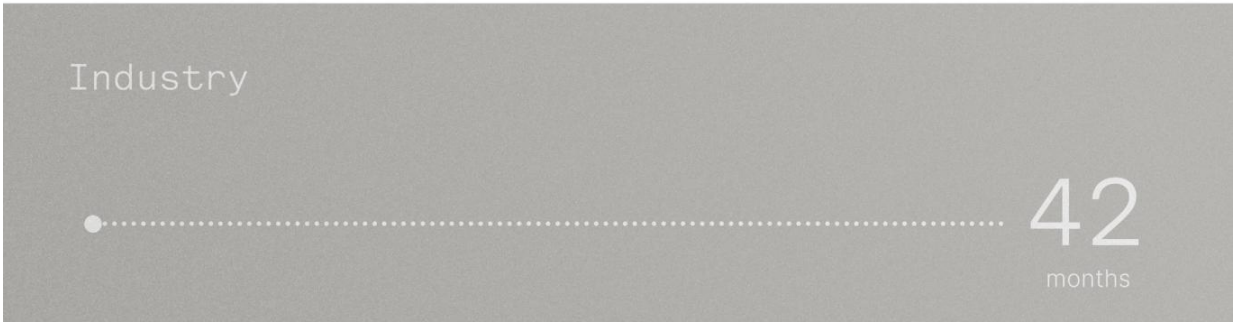
Predictions and minimal standard experiments enabled rapid and efficient identification of development candidate



Rapid in silico novel target identification



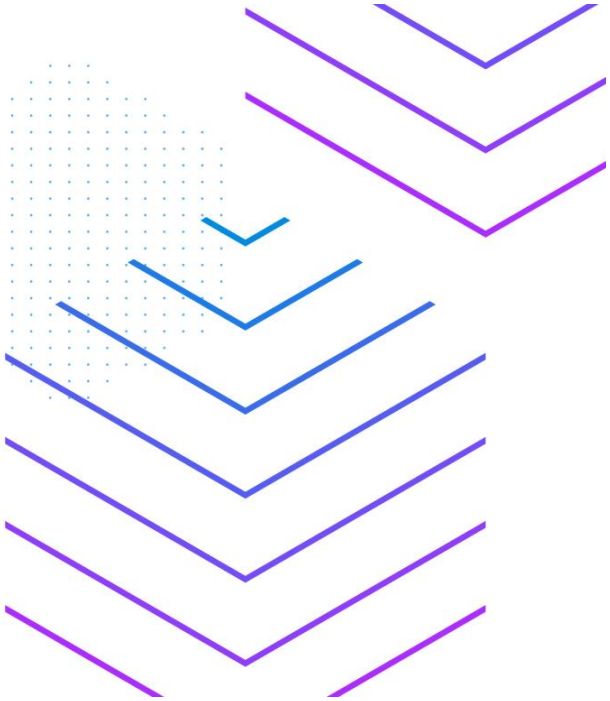
Time from target ID to IND enabling study



Recursion

Case Study: Undisclosed Oncology Target 1

Connecting data layers end-to-end improves quality and speed of insights



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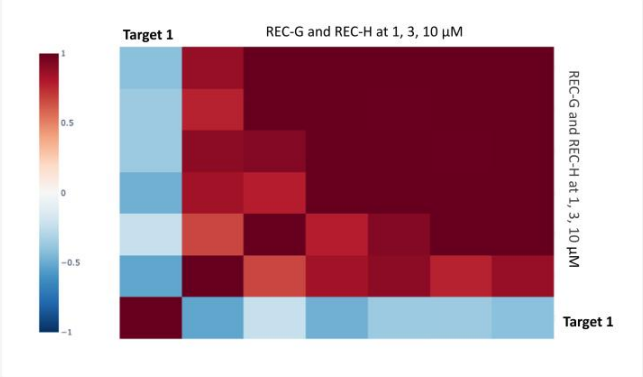
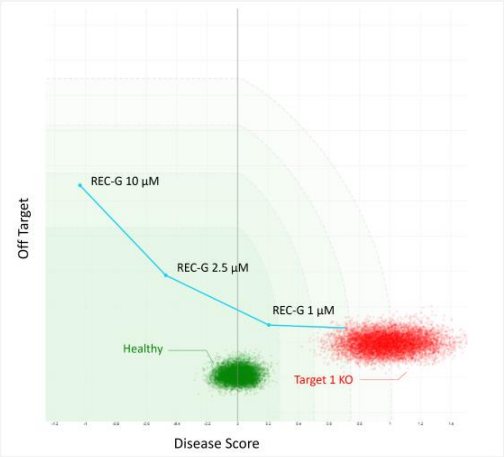
Identifying novel Target 1 and opposing molecules through automated, in silico analysis

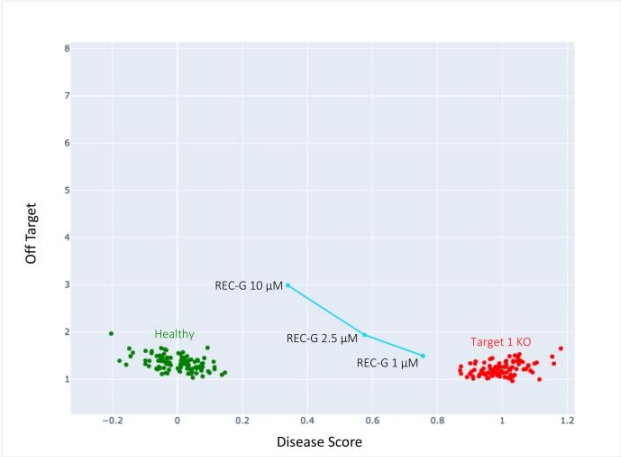


Physical data confirms digital hypothesis

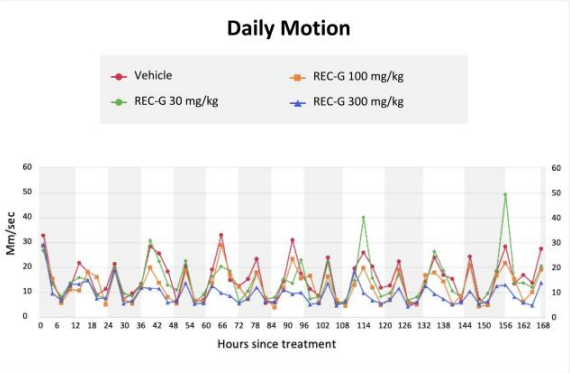
Phenomics Confirmation Screen

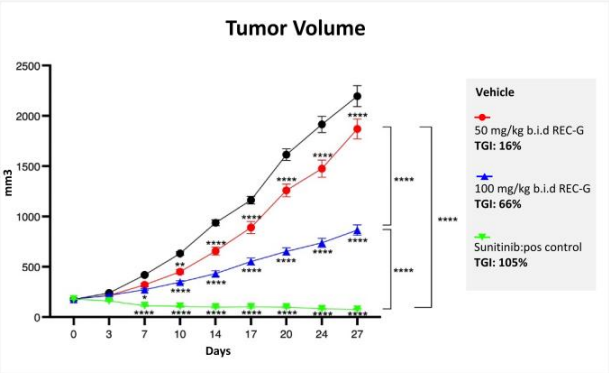


Transcriptomics Confirmation Screen

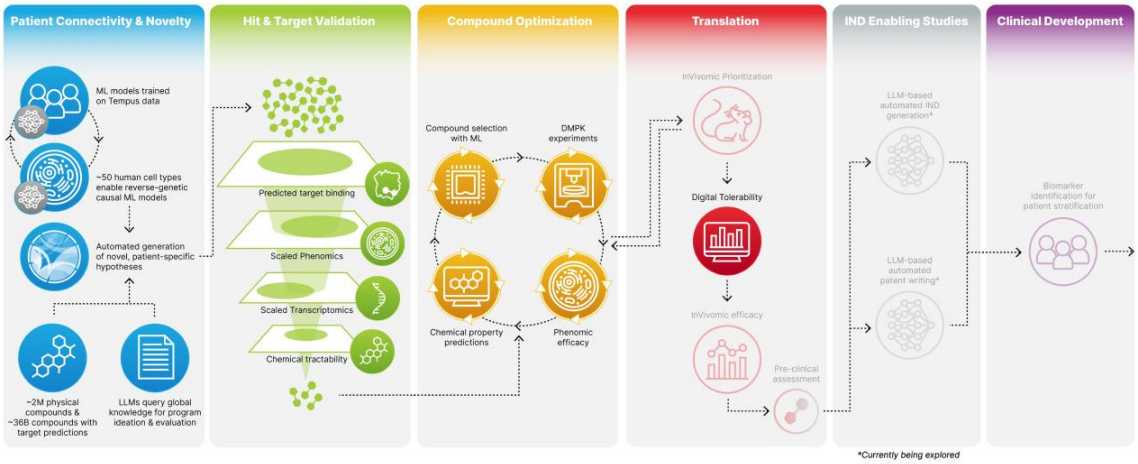


InVivomics enables identification of tolerable dose for rapid positive proof of concept readouts for unoptimized molecules





End-to-end automation drives significant efficiency gains to deliver lead in 10 months



Recursion

Case Study: Undisclosed Oncology Target 2

Identifying novel molecules for a previously undruggable target

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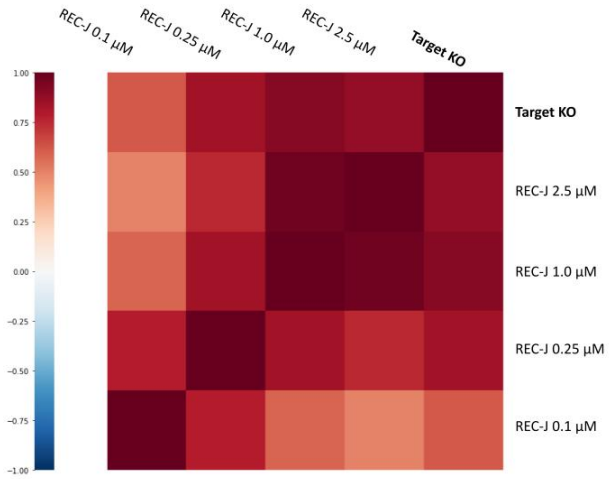
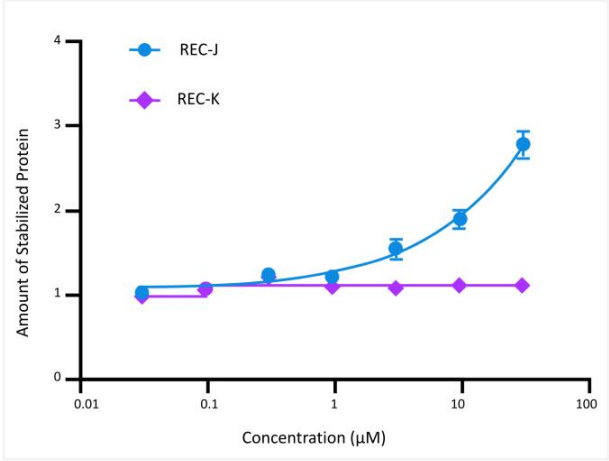
In silico analysis reveals compound highly phenosimilar to Target KO



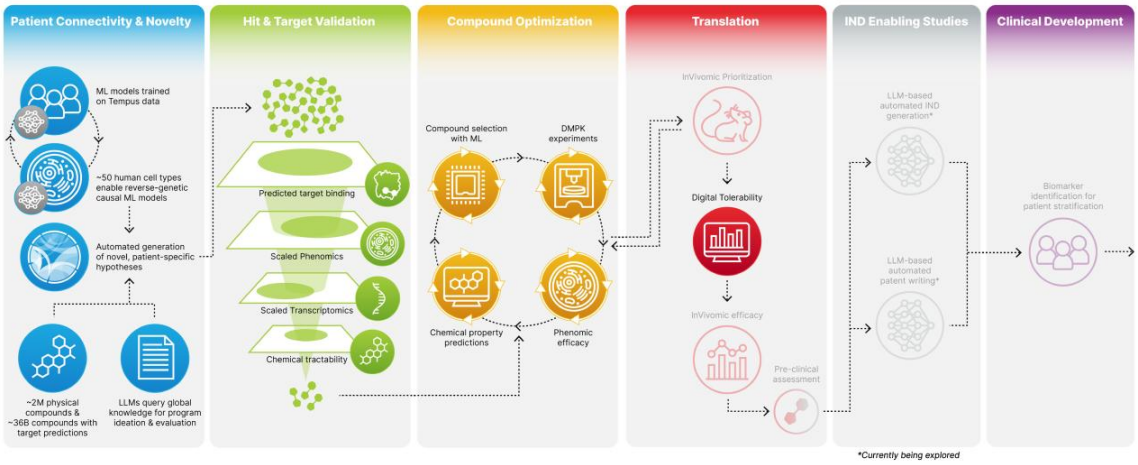
Compound with high predicted phenosimilarity bind to Target 2



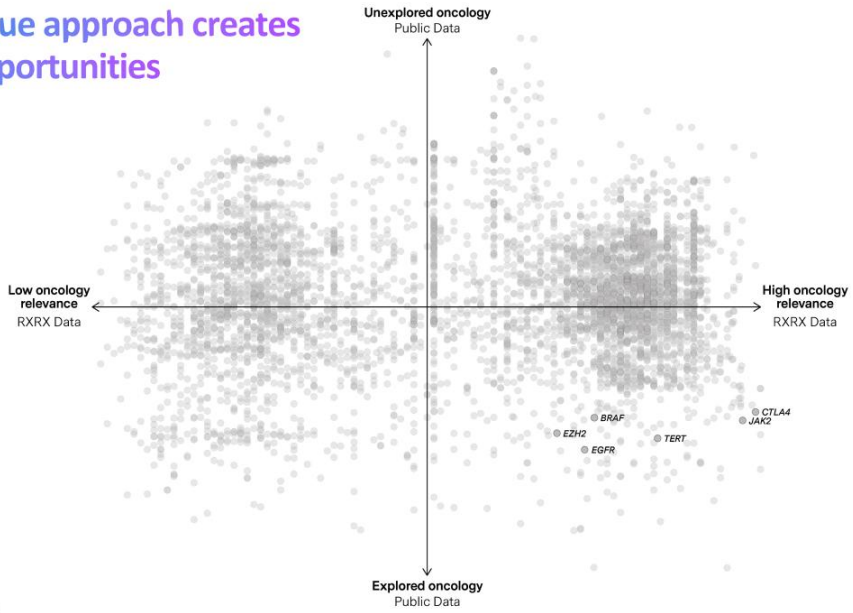
REC-J
EC_{50} = 100 µM

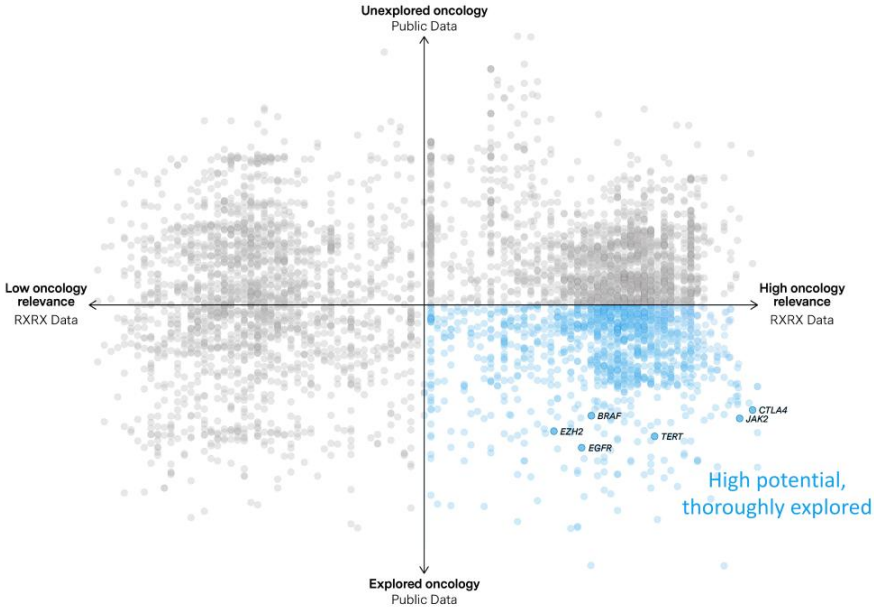
REC-K
EC_{50} = >10 µM

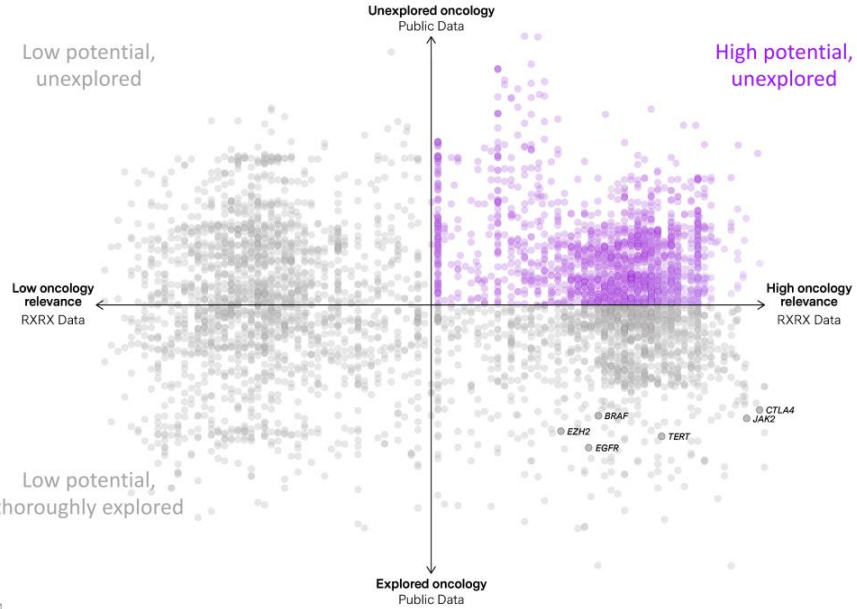
Overcoming the hurdles of drug discovery: undruggable targets

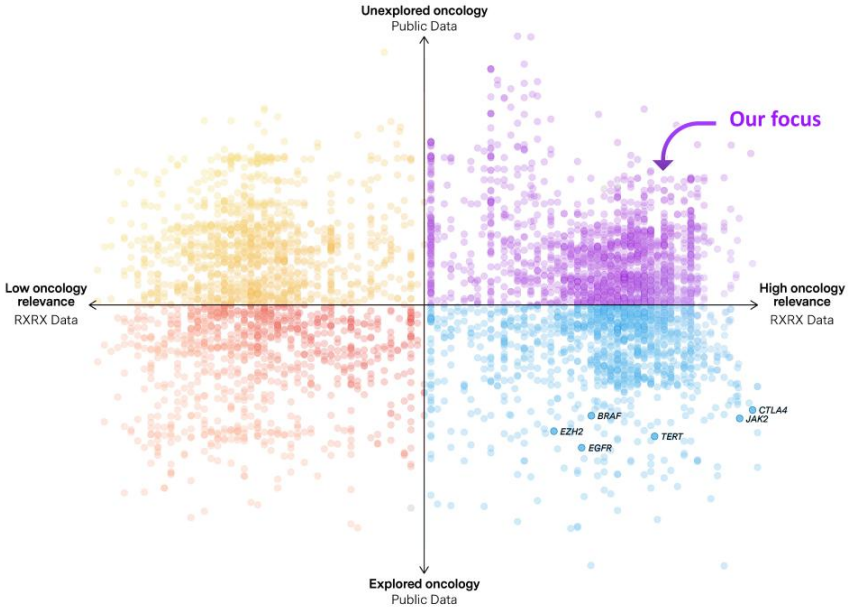


Our unique approach creates novel opportunities



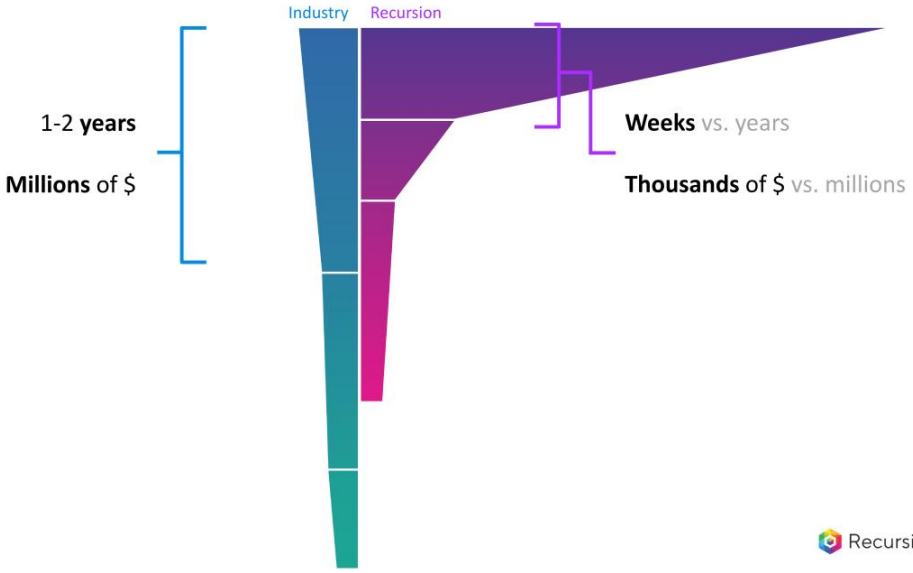

Unexplored oncology
Public Data
Low oncology relevance
RXRX Data
High oncology relevance
RXRX Data
CTLA4
JAK2
BRAF
EZH2
TERT
EGFR
High potential, thoroughly explored
Explored oncology
Public Data


Unexplored oncology
Public Data
Low potential,
unexplored
High potential,
unexplored
Low oncology
relevance
RXRX Data
High oncology
relevance
RXRX Data
BRAF
CTLA4
JAK2
EZH2
TERT
EGFR
Low potential,
thoroughly explored
Explored oncology
Public Data


Unexplored oncology
Public Data
Our focus
Low oncology relevance
RXRX Data
High oncology relevance
RXRX Data
BRAF
CTLA4
JAK2
EZH2
TERT
EGFR
Explored oncology
Public Data

We are turning this into a search problem, evaluating new programs in bulk

Reshaping the timelines and shape of drug discovery research



Recursion

Fireside Chat:
Dr Deepak Nijhawan

Associate Professor in the Departments of Internal Medicine and Biochemistry at UT Southwestern Medical Center

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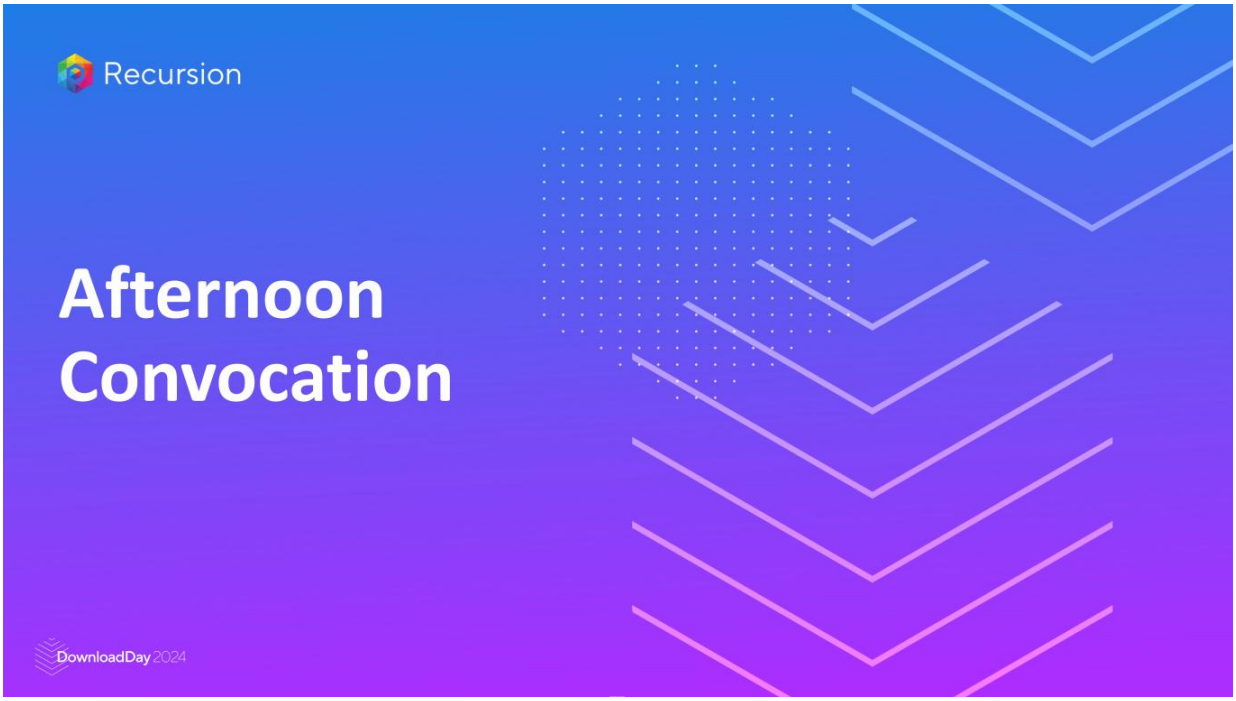
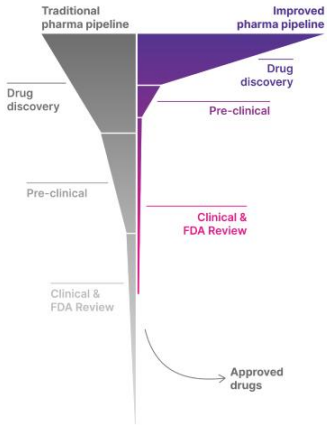

Recursion
Afternoon
Convocation
DownloadDay 2024


AI impact in healthcare
Patients are waiting

Why: Impact of AI & healthcare for patients

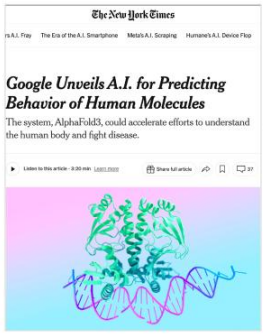
Why: Current state and the opportunity ahead

	Therapeutic hypothesis	Molecular invention	Precision development	Digital commercialization
From	Pathway-specific research, genomics	Heuristics-based design, molecular modeling, immunization	Lengthy, linear clinical processes, imprecise disease definition, high failure rates	Broad, one-size-fits-all marketing
To	**Industrialized, AI-powered** discovery **Multiomics**-based, image-based, **holistic**	**ML, generative AI and physics-based design**, optimization, predictive models	**Precision medicine,** adaptive trial design **RWE and ML-driven enrollment,** improved likelihood of success, and faster	**Personalized medicine,** AI-enabled patient and provider engagement



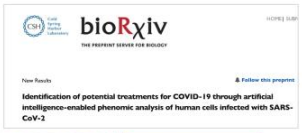
Improve success rates, faster execution

What: Industry's current state


The New York Times

Google Unveils A.I. for Predicting Behavior of Human Molecules

The system, AlphaFold3, could accelerate efforts to understand the human body and fight disease.


bioRxiv

THE PREPRINT SERVER FOR BIOLOGY

Identification of potential treatments for COVID-19 through artificial intelligence-enabled phenomic analysis of human cells infected with SARS-CoV-2


U.S. FOOD & DRUG ADMINISTRATION

Using Artificial Intelligence & Machine Learning in the Development of Drug & Biological Products

Discussion Paper and Request for Feedback


nature medicine

Reimagining patient-centric cancer clinical trials: a multi-stakeholder international coalition

Relentlessly **outcomes focused** vs. *point solutions*

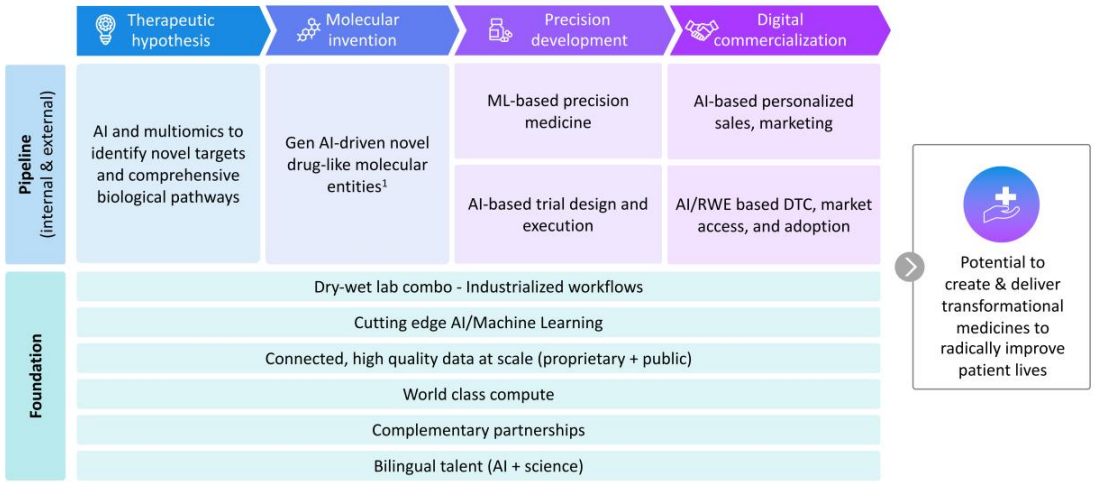
Investing to innovate *where it matters the most*

Agility to adopt new waves of tech + bio innovation

Bilingual talent and culture (science + AI)

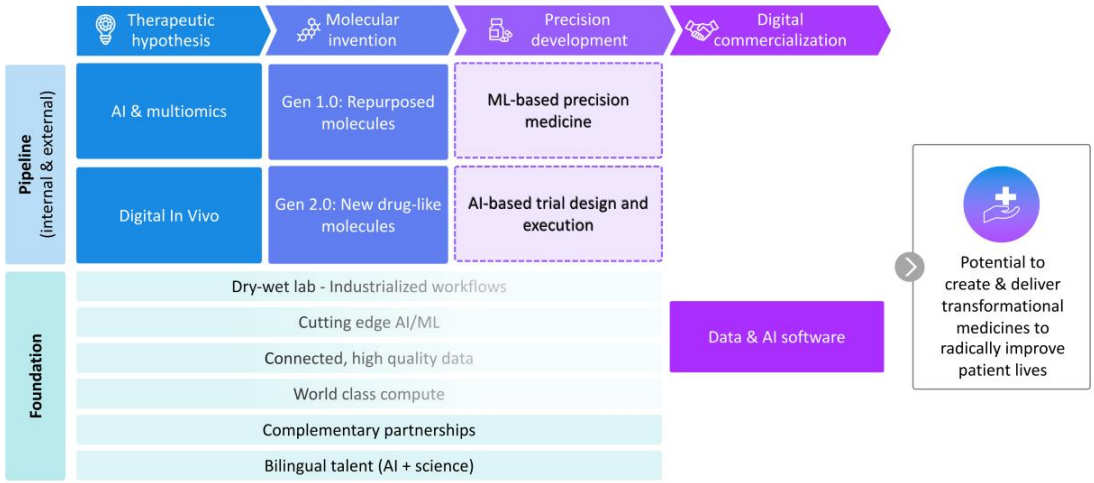
What: The pharma of tomorrow

Breadth and depth in AI and pharma excellence

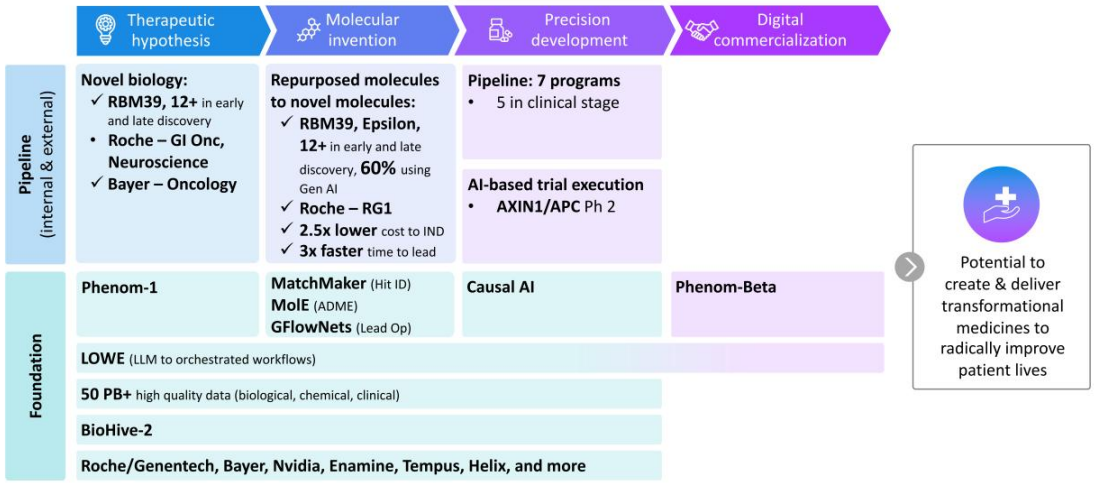


1. with optimized PK/PD profiles

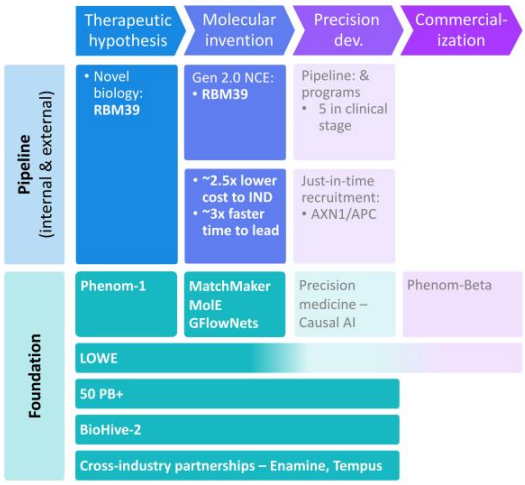
RXRX Gen 1.0: The Rise of a TechBio

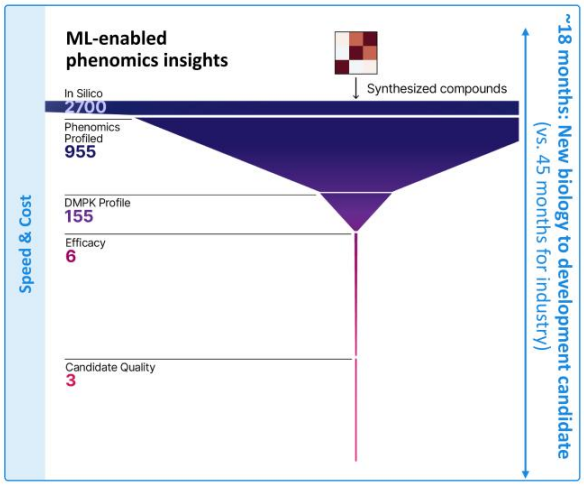


RXRX Gen 1.0: Emerging proof points

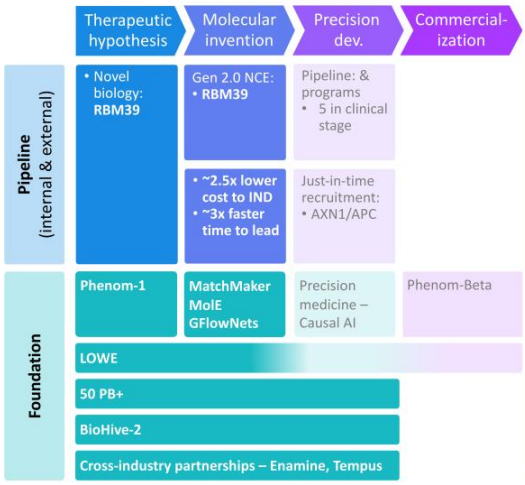


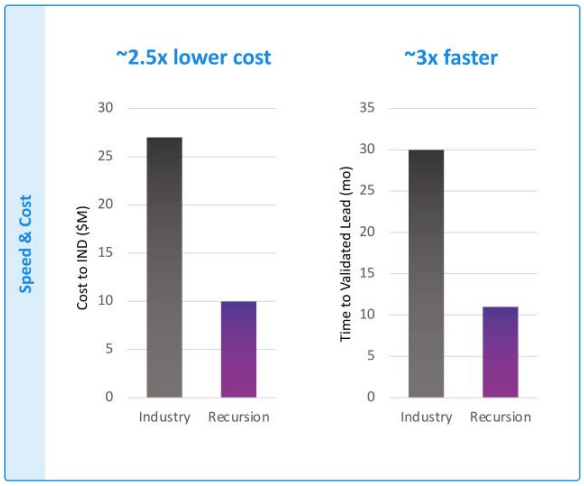
Use case 1: RBM39 – new biology and chemistry



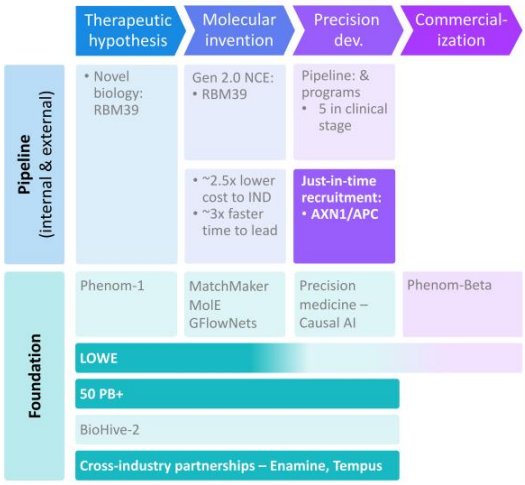


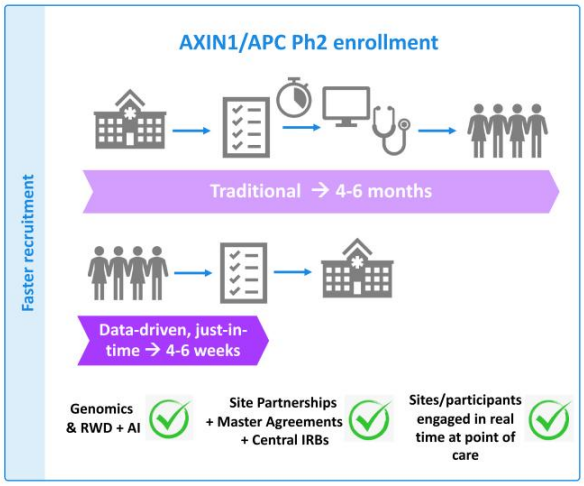
Use case 2: Faster execution, lower cost for preclinical programs





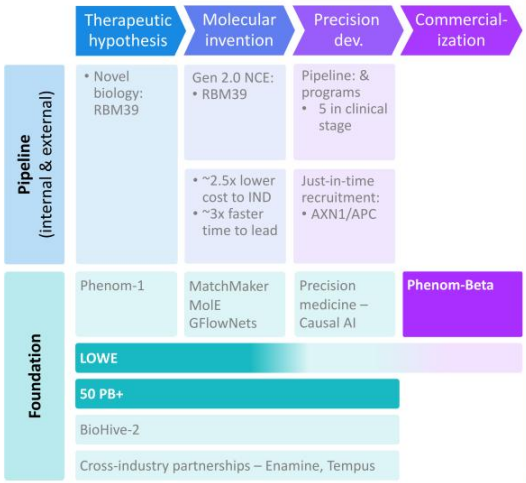
Use case 3: Advancing clinical execution using AI

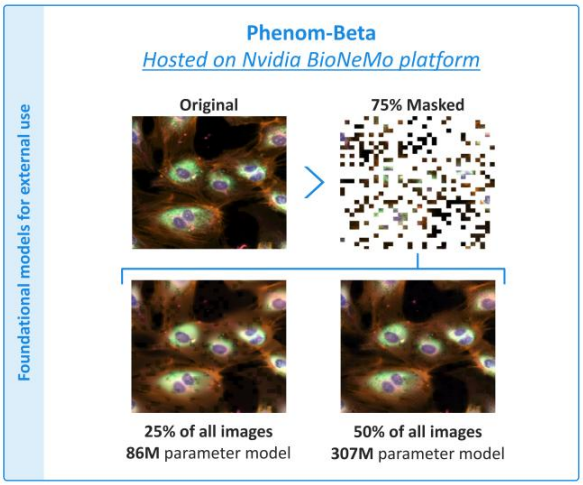




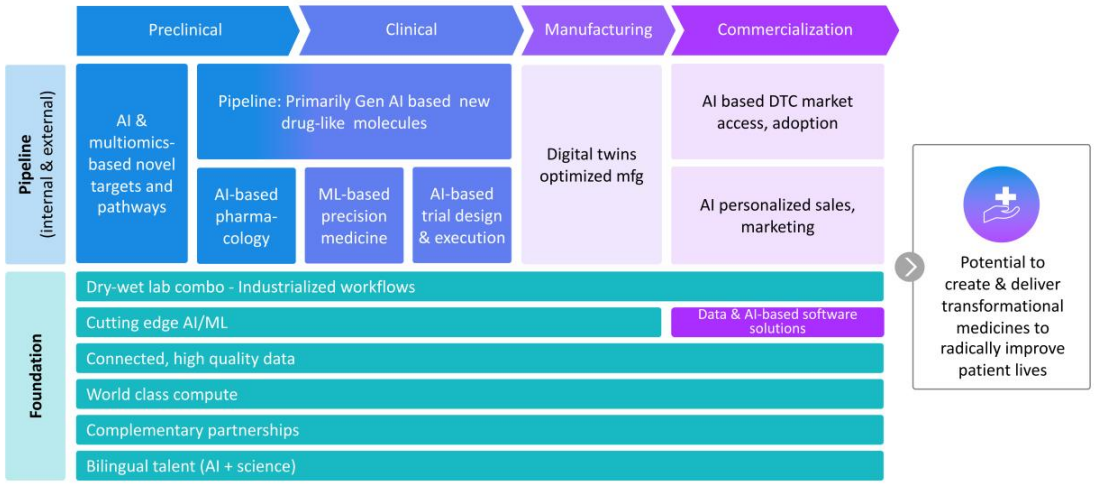
Use case 4: Suite of AI-first models

Use case 5: Foundational models for external use





What's next?

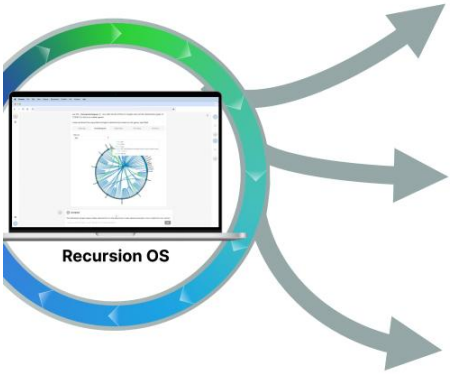

Preclinical
Clinical
Manufacturing
Commercialization
Pipeline (internal & external)
AI & multiomics-based novel targets and pathways
Pipeline: Primarily Gen AI based new drug-like molecules
AI-based pharma-cology
ML-based precision medicine
AI-based trial design & execution
Digital twins optimized mfg
AI based DTC market access, adoption
AI personalized sales, marketing
Foundation
Dry-wet lab combo - Industrialized workflows
Cutting edge AI/ML
Data & AI-based software solutions
Connected, high quality data
World class compute
Complementary partnerships
Bilingual talent (AI + science)
Potential to create & deliver transformational medicines to radically improve patient lives

Path forward objectives – next 12 months

- Advance Preclinical and Clinical Stage Programs
- Enhance AI-Driven Chemistry
- Innovate with AI across Clinical Development
- Continue Investment in Scalable Infrastructure – wet and dry lab
- Deliver on Strategic Partnerships
- Create additional SaaS opportunities to advance the creation of medicines


Recursion
Partnerships
DownloadDay 2024

We harness value from the Recursion OS with a multi-pronged capital-efficient business strategy



Pipeline Strategy

Build internal pipeline in indications with potential for **accelerated path** to approval

- **Precision Oncology**
- **Rare Disease**

Partnership Strategy

Partner in **complex therapeutic areas** requiring large financial commitment or competitive arbitrage

Leverage partner knowledge and clinical development capabilities

- **Neuroscience***
- **Undruggable Oncology**
- **Other large, intractable areas of biology (e.g., CV/Met)**

Data Strategy

License subsets of data and key tools

Direct generation of new data internally **to maximize pipeline and partnership value-drivers**

- **Licensing**
- **Augment Recursion OS**

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

We harness value from the Recursion OS with a multi-pronged capital-efficient business strategy

Pipeline

Pipeline Strategy

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Data

Data Strategy

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

Roche Genentech Partnership

Neuroscience
(and single oncology indication)
Announced Dec 2021

Roche
Genentech
A Member of the Roche Group

BAYER

Undruggable oncology targets
Announced Sept 2020
Amended Nov 2023

Computational Sciences in Drug Development

John Marioni, PhD FMedSci

Senior Vice President & Head of Computational Sciences, gRED

Genentech

Schema XI

Fig. 1.

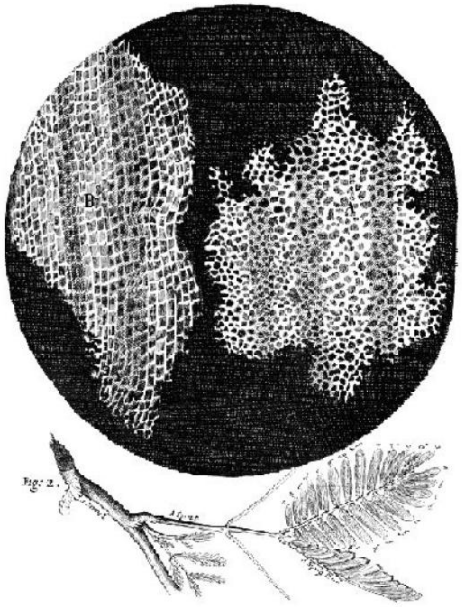


Fig. 2.

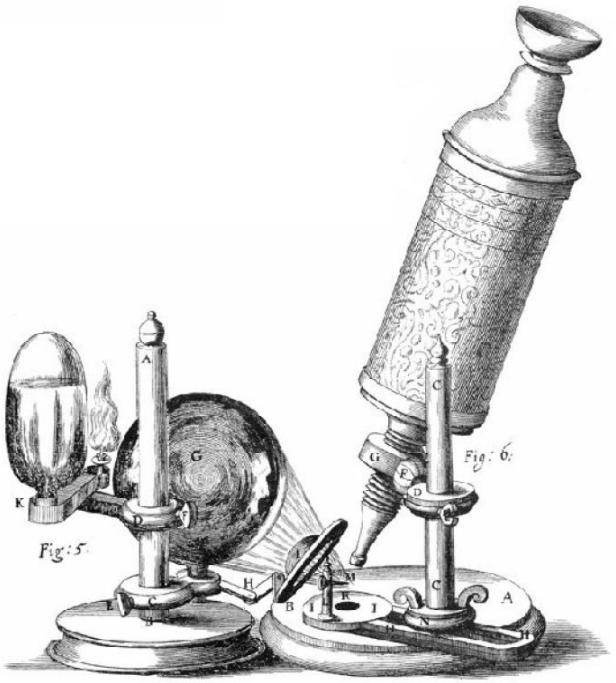
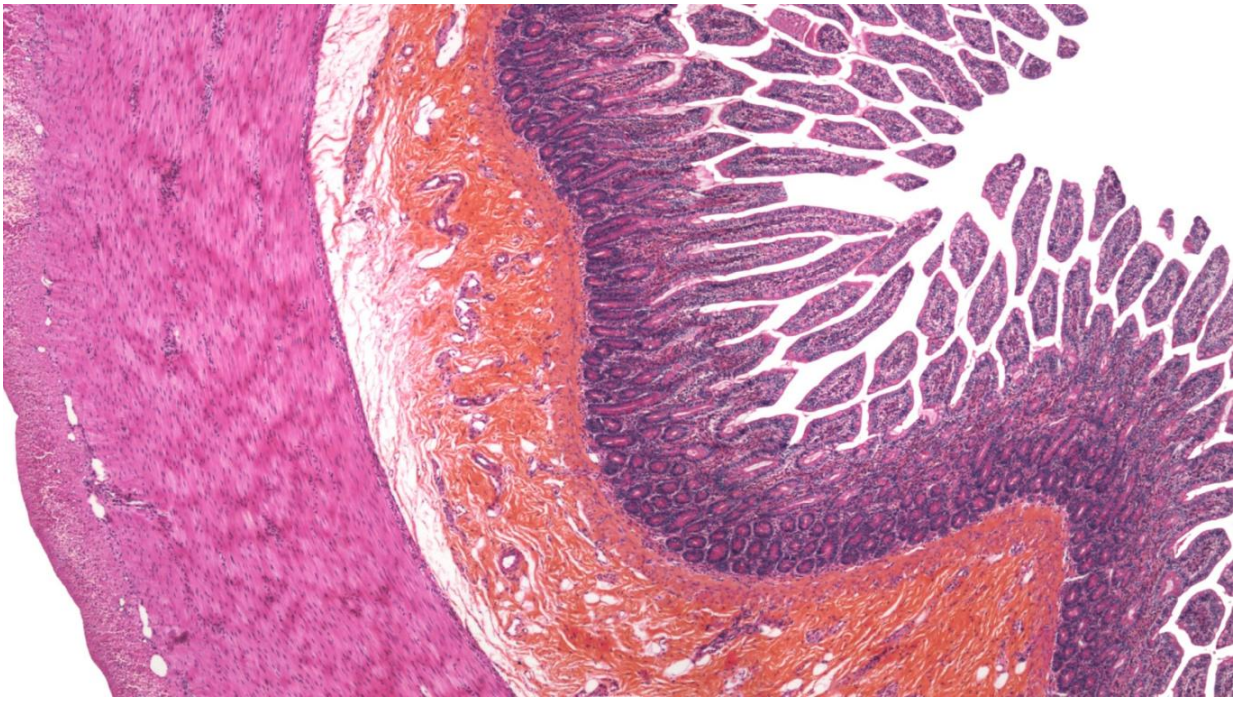
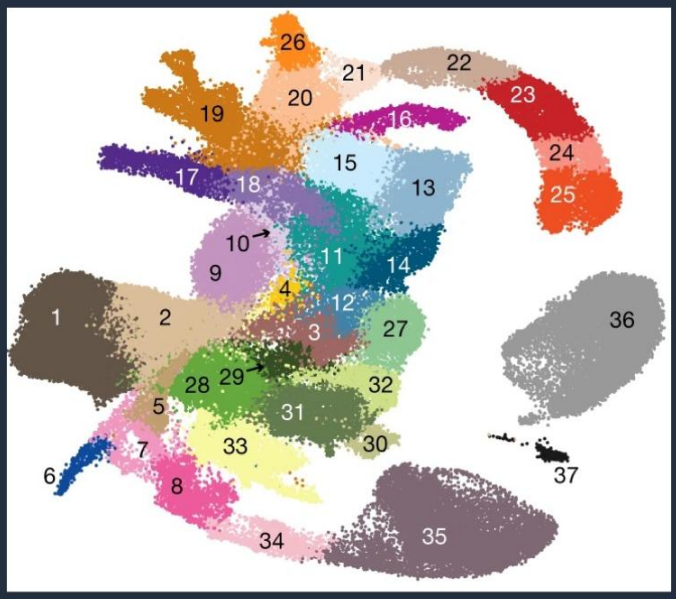


Fig: 5.

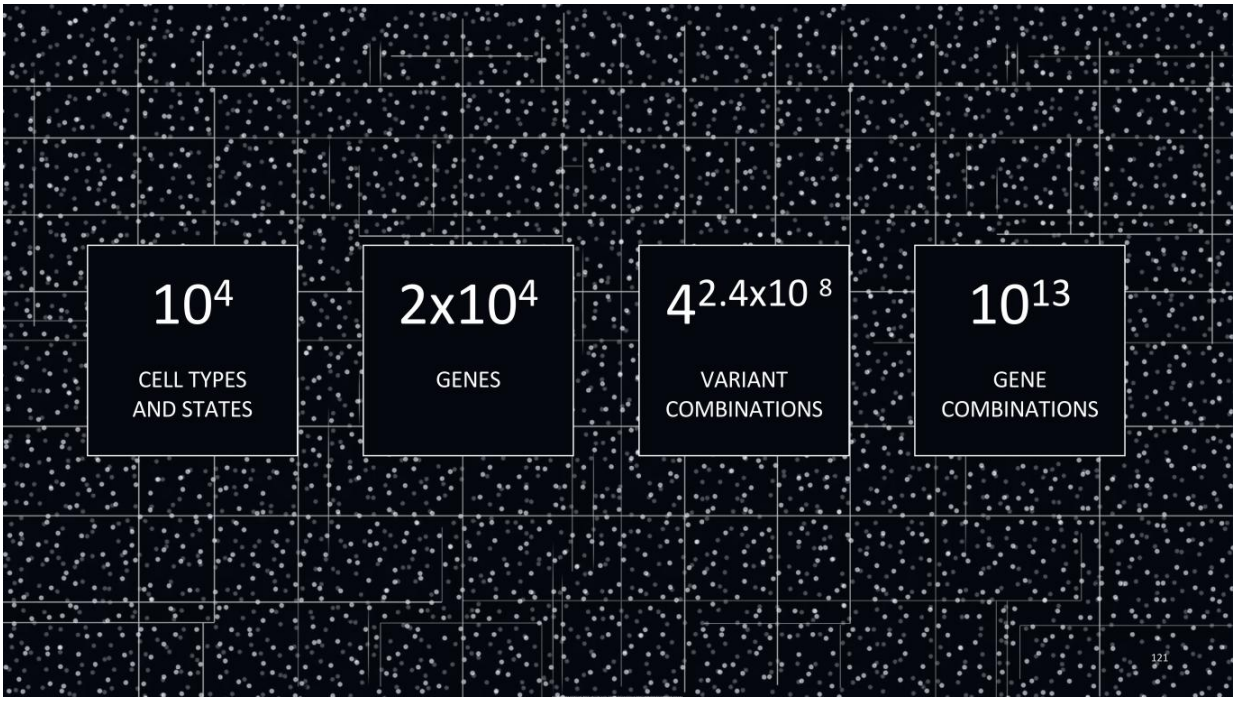
Fig: 6.





Pijuan-Sala, Griffiths, Guibentif, et al., Nature, 2019

We can generate **huge amounts of data**—from both **healthy** and **perturbed** conditions… but how will we make sense of these data and make predictions about perturbations we have not seen?

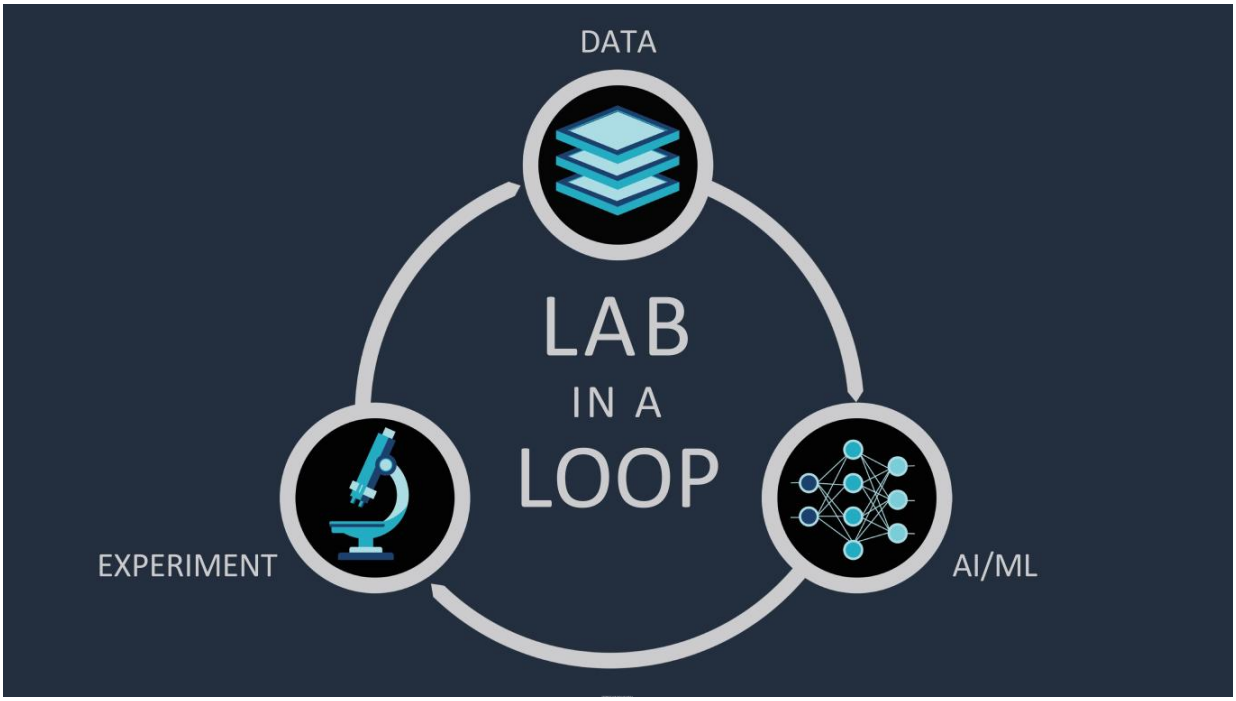

10^4
CELL TYPES AND STATES
$2x10^4$
GENES
$4^{2.4x10^8}$
VARIANT COMBINATIONS
10^{13}
GENE COMBINATIONS
121

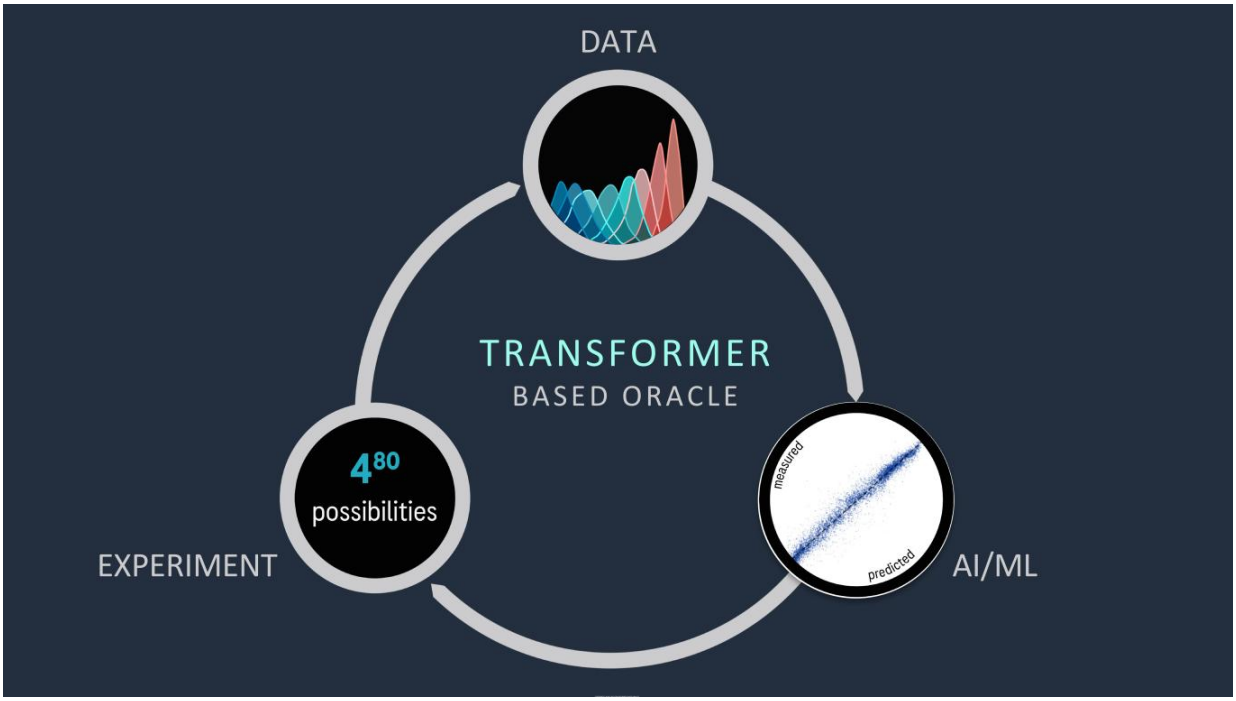
This is one example where computational models, especially **foundation models** and **generative AI** can **transform** how we discover and develop **medicines**

This is one example where computational models, especially **foundation models** and **generative AI** can **transform** how we discover and develop **medicines**

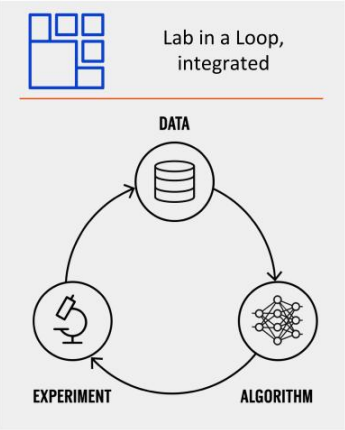
gRED Computational Sciences (gCS) seeks to make this vision a reality

HOW?

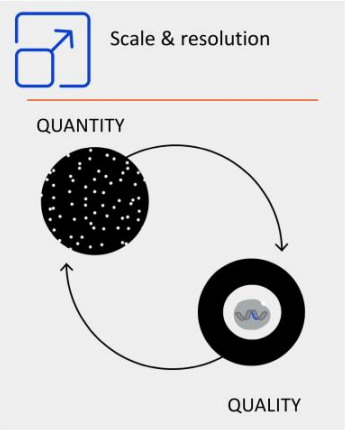

DATA
LAB
IN A
LOOP
EXPERIMENT
AI/ML


DATA
TRANSFORMER
BASED ORACLE
4^{80}
possibilities
EXPERIMENT
measured
predicted
AI/ML

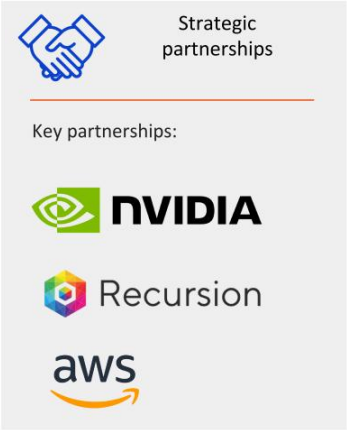
Our AI strategy for R&D



Full stack, across all aspects of R&D; up to "self drive"

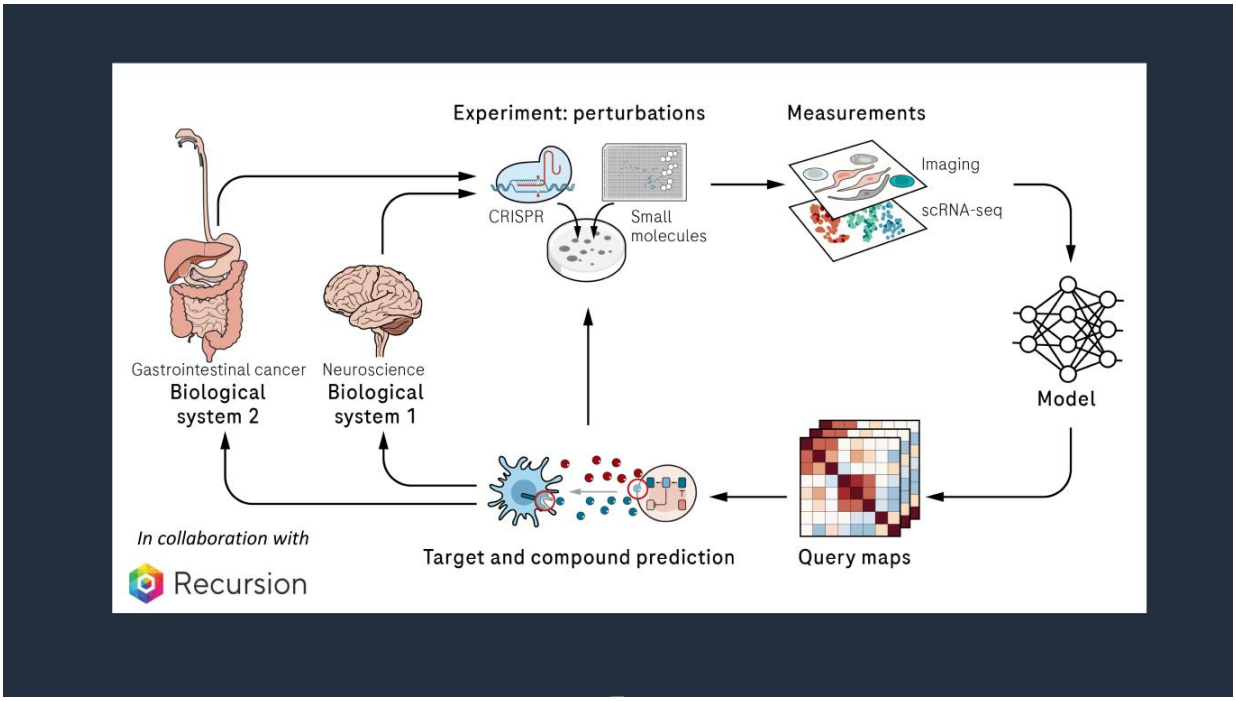


Maximize benefit of large size: proprietary legacy data and data generation capacity



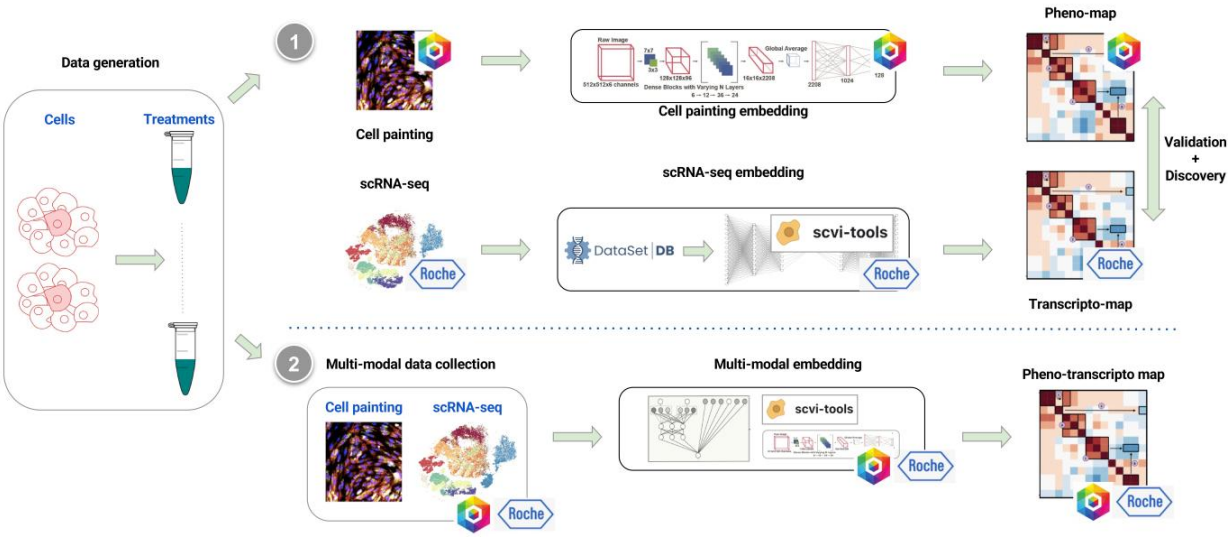
Partnership around unique data generation, AI/ML model development and hardware

RIGHT TARGET OR CHEMICAL MATTER FOR THE DISEASE


Experiment: perturbations
Measurements
CRISPR
Small molecules
Imaging
scRNA-seq
Gastrointestinal cancer
Biological system 2
Neuroscience
Biological system 1
Model
In collaboration with
Recursion
Target and compound prediction
Query maps

RIGHT MOLECULE

Multi-Modal Model Development




MODELS ARE ONLY
AS GOOD AS
THE DATA

Challenges

Data management, metadata and access

Integrating expertise from multiple disciplines

Access to scalable scientific computing for fitting/fine-tuning models

Democratizing access and ensuring use of data and models

Challenges... But already driving to solutions

Data management, metadata and access: modernizing our data stack and exploiting the cloud and associated tools

Integrating expertise from multiple disciplines: internal organizational structure and external partners

Access to scalable scientific computing for fitting/fine-tuning models: partnering with outstanding companies in the industry

Democratizing access and ensuring use of data and models: Autonomous agents as the next-generation scientific assistant

THANK YOU!

Bayer Partnership

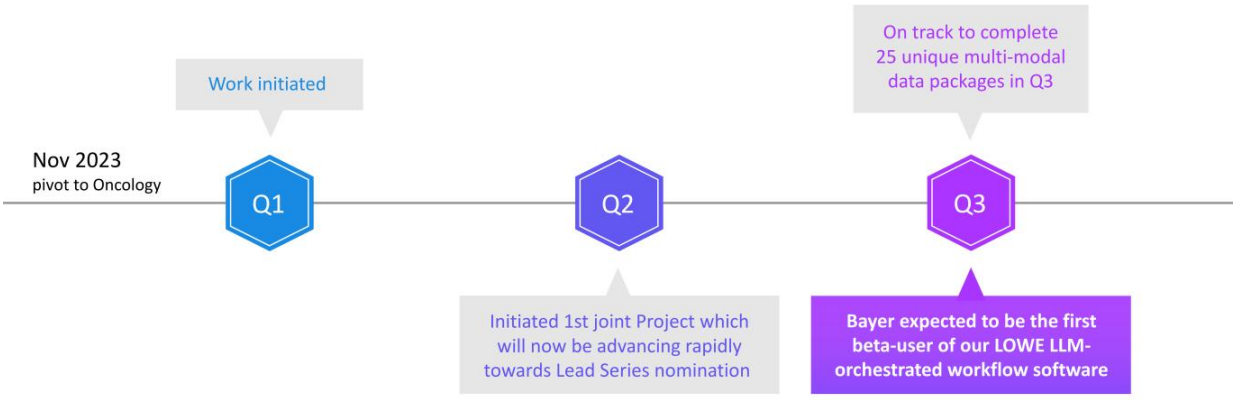
Neuroscience
(and single oncology indication)
Announced Dec 2021

Roche
Genentech
A Member of the Roche Group

Undruggable oncology targets

Collaboration announced Sept 2020
Amended Nov 2023

Scientific Collaborations: Undruggable Oncology Targets



Scientific Collaborations: Undruggable Oncology Targets

Scientific Collaborations: Platform, Tech, and Data

Scientific Collaborations: Real world (de-identified) data

- Multi-site network protocol continuously aggregating in **various therapeutic areas**
- **Geographically** and **demographically diverse** population consented for re-contact
- **Whole exome sequencing** paired with rich, **longitudinal clinical data** for all consenting patients
- Access to **hundreds of thousands of unique records** each year

We harness value from the Recursion OS with a multi-pronged capital-efficient business strategy


Recursion
Clinical
DownloadDay 2024

Recursion

Our pipeline reflects the scale and breadth of our approach

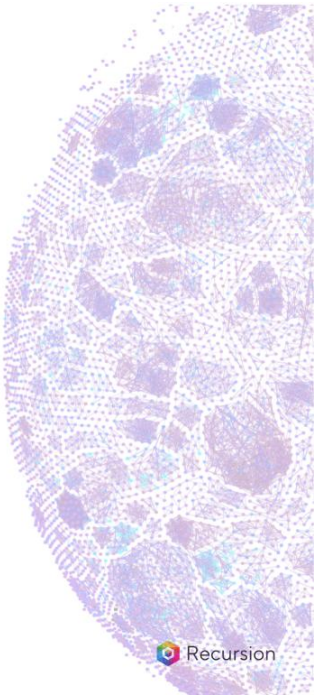
	Program	Indication	Target	Patient Population	Preclinical	Phase 1	Phase 2	Phase 3	Anticipated Near-Term Milestones
Rare & Other	**REC-994**	Cerebral Cavernous Malformation	Superoxide	~ 360K[1]	*SYCAMORE*				Topline readout in September 2024
	REC-2282	Neurofibromatosis Type 2	HDAC	~ 33K[2]	*POPLAR*				Preliminary data readout in Q4 2024
	REC-4881	Familial Adenomatous Polyposis	MEK	~ 50K[3]	*TUPELO*				Preliminary data readout in H1 2025
	REC-3964	*Clostridioides difficile* Infection	TcdB	~730K	*ALDER*				Ph2 initiation in Q4 2024
	Epsilon	Fibrotic Diseases	Undisclosed	~ 50K[4,5,6]					IND submission in early 2025
Oncology	**REC-4881**	Advanced AXIN1/APC-mutant Cancers	MEK	~ 104K[7]	*LILAC*				Preliminary data readout in H1 2025
	RBM39	Advanced HR-Proficient Cancers	RBM39	~ 220K[8]					IND submission in Q3 2024, Ph 1/2 initiation in Q4 2024

More than a dozen discovery and research programs in oncology or with our partners – first program optioned by Roche-Genentech in GI-oncology

All populations defined above are US and EU5 incidence unless otherwise noted. EU5 is defined as France, Germany, Italy, Spain, and UK. (1) Prevalence for hereditary and sporadic symptomatic population. (2) Annual US and EU5 incidence for all *NF2*-driven meningiomas. (3) Prevalence for adult and pediatric population. (4) Our program has the potential to address several indications. (5) We have not finalized a target product profile for a specific indication. (6) Incidence for US only. (7) 2L+ drug-treatable population. (8) 2L+ drug-treatable population comprising ovarian, prostate, breast, and pancreatic cancers.

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



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Recursion

Clinical: CCM

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

PREVALENCE & STANDARD OF CARE

~360,000

Symptomatic US + EU5, >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

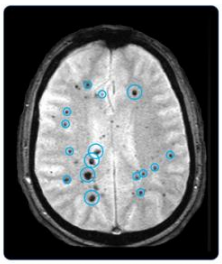
PATHOPHYSIOLOGY & REASON TO BELIEVE

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

Efficacy signal 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

KEY ELEMENTS

- Targeting **sporadic and familial symptomatic CCM** patients with *CCM1*, *CCM2*, and *CCM3* mutations
- Superoxide scavenger, small molecule
- Phase 2 readout **expected September 2024**
- US & EU **Orphan Drug Designation**



Vascular malformations (cavernomas)

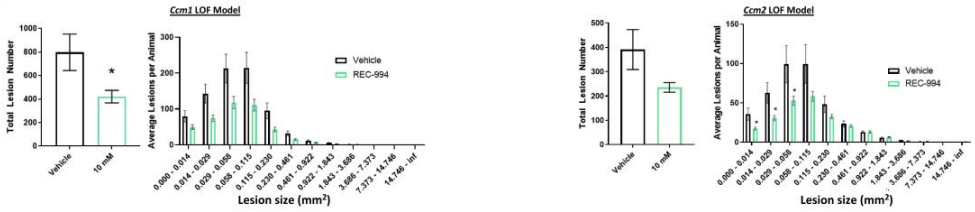
Julia – living with CCM

Clinical: CCM

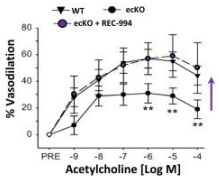
Preclinical Studies Confirm Insight

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

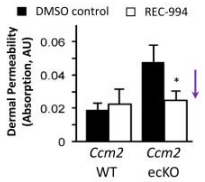
1 **Reduces lesion number & size in *Ccm1* and *Ccm2* LOF mouse models**



2 **Rescues acetylcholine-induced vasodilation defect**



3 **Rescues dermal permeability defect in CCM2 mice**



- **REC-994 stabilizes the integrity of vasculature against challenges to permeability**
- **Altered vascular permeability is a clinically relevant feature of CCM lesions**

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

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

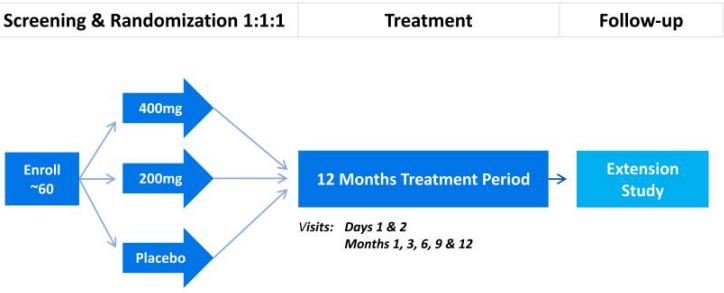
Topline Data Expected September 2024

Enrollment Criteria

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

Outcome Measures

- Primary: Safety and tolerability
- Secondary: Efficacy
- Exploratory: Biomarkers



Source : The Symptomatic Cerebral Cavernous Malformation Trial of REC-994 (SYCAMORE)

Clinical: CCM

REC-994 for CCM: Expectations

Outcome Measures

- **Primary: Safety and Tolerability**
  - **Adverse events & symptoms**
- **Secondary & Exploratory:**
  - **Efficacy**
    - **Clinician-measured outcomes** (CGI, PGI)
    - **MRI Imaging**
    - **Impact of acute stroke** (mRS, NIHSS)
    - **Patient and Investigator reported outcomes** (SMSS, PROMIS-29, CCM-HI, symptom questionnaires)

Trial Update

- **Enrollment is complete**
- **Vast majority of participants** who completed 12 months of treatment continue to enter **long-term extension**
- **Analysis**
  - Identification of **trends across multiple endpoints**
  - **Changes in vascular permeability**
    - E.g., hemosiderin deposition
  - **Change in lesion burden**
  - **Subgroup**

Source: https://clinicaltrials.gov/study/NCT05085561

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

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Recursion

Clinical: NF2

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

PREVALENCE & STANDARD OF CARE

~33,000 **Treatable US + EU**

No approved therapy

- Surgery/RT is standard of care (when feasible)
- Location may make complete resection untenable, leading to hearing loss, facial paralysis, poor balance and visual difficulty
- **Stasis or shrinkage of tumor could improve prognosis**

CAUSE

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

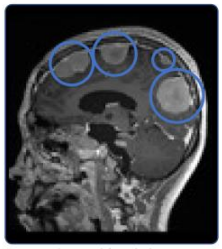
PATHOPHYSIOLOGY & REASON TO BELIEVE

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

Efficacy signal 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

KEY ELEMENTS

- Targeting **familial & sporadic NF2 meningioma** patients
- HDAC inhibitor, small molecule
- Oral dosing
- Preliminary readout **expected Q4 2024**
- **Fast-Track** and US & EU **Orphan Drug Designation**

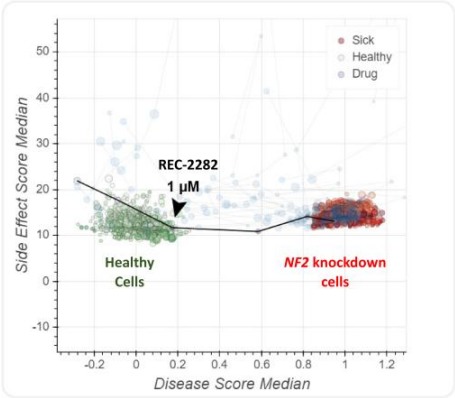


Intracranial meningiomas

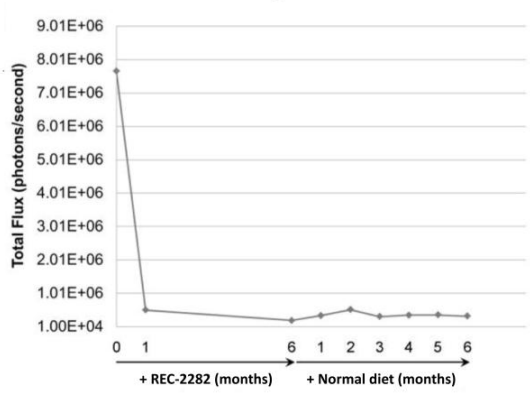
Ricki – living with NF2

Clinical: NF2

Insight from OS : REC-2282 Rescued Loss of NF2



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



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

Clinical: NF2

POPLAR Trial: REC-2282 for NF2 Part A Underway

Key Enrollment Criteria

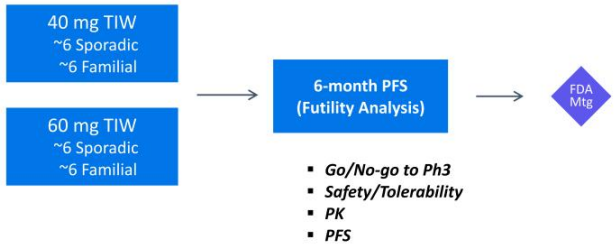
- MRI-confirmed progressive meningioma
- Sporadic meningioma with confirmed NF2 mutation
- Familial NF2 meningioma
- Have documented progression with past 24 months

Outcome Measures

- Primary: PFS6 defined as proportion of patients who are alive or progression free after
- Secondary: ORR, Safety, PK/PD

Phase 2/3 trial initiated in Q2 2022

Phase 2 portion



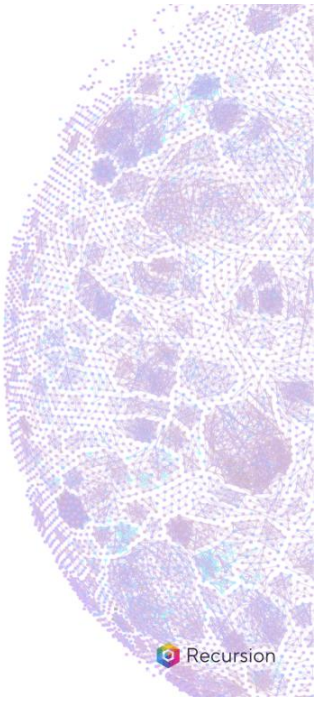
- ***Go/No-go to Ph3***
- ***Safety/Tolerability***
- ***PK***
- ***PFS***

Preliminary Phase 2 readout (safety & preliminary efficacy) expected in **Q4 2024**

Source : Efficacy and Safety of REC-2282 in Patients With Progressive Neurofibromatosis Type 2 (NF2) Mutated Meningiomas (POPLAR-NF2)

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



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Recursion

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*

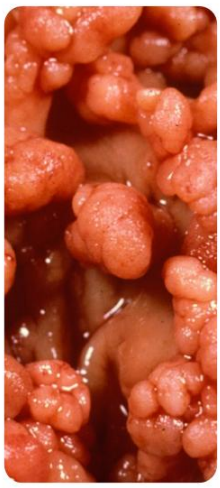
PATHOPHYSIOLOGY & REASON TO BELIEVE

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

Efficacy signal 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

KEY ELEMENTS

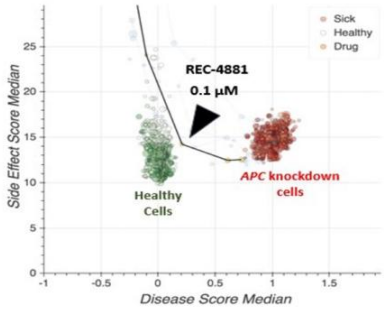
- Targeting **classical FAP patients (with *APC* mutation)**
- MEK inhibitor, small molecule
- Oral dosing
- Preliminary readout **expected H1 2025**
- **Fast-Track** and US & EU **Orphan Drug Designation**



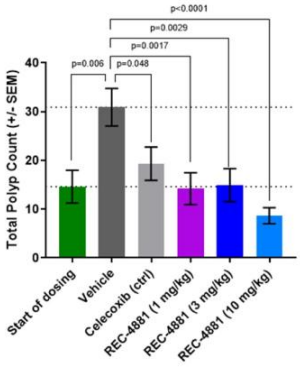
Polyps Found in Colon and Upper GI Tract

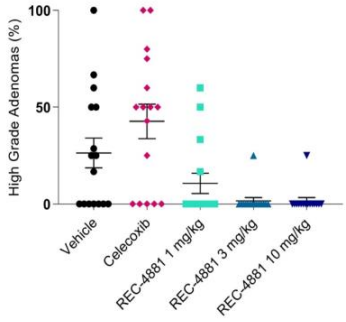
Preclinical Validation of Novel OS Insight in Relevant FAP Models

REC-4881 rescued phenotypic defects of cells with APC knockdown



↓ polyp count





Clinical: FAP

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

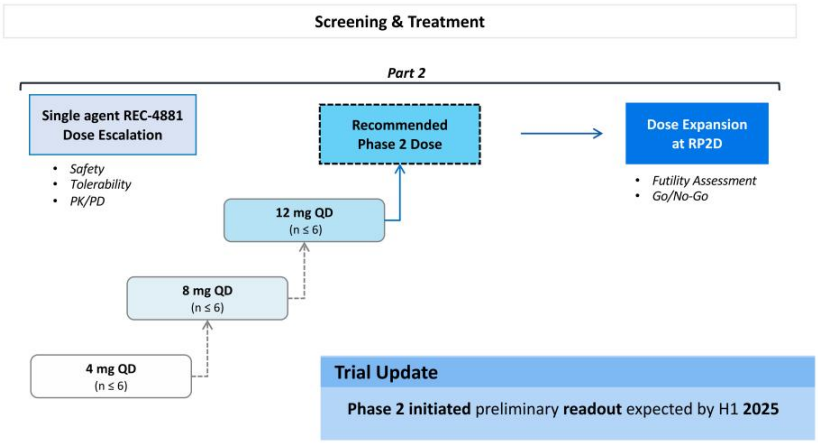
Part 2 Enrollment Commenced

Key Enrollment Criteria

- Confirmed *APC* mutation
- ≥ 55 years old
- Post-colectomy/proctocolectomy
- No cancer present
- Polyps in either duodenum (including ampulla of vater) or rectum/pouch

Outcome Measures

- Primary:
  - Safety & Tolerability
  - Change from baseline in polyp burden at 12 weeks
  - RP2D
- Secondary:
  - PK/PD



Trial Update

Phase 2 initiated preliminary **readout** expected by H1 **2025**

Source : Evaluate REC-4881 in Patients With FAP (TUPELO)

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

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

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Recursion

Clinical: AXIN1 or APC

LILAC Clinical Trial: REC-4881 for AXIN1 or APC mutant cancers

~104,000 **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

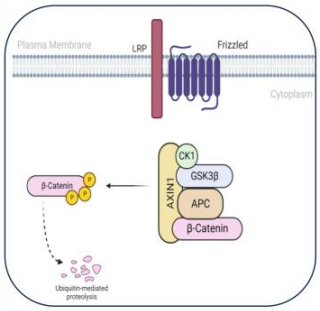
PATHOPHYSIOLOGY & REASON TO BELIEVE

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

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

KEY ELEMENTS

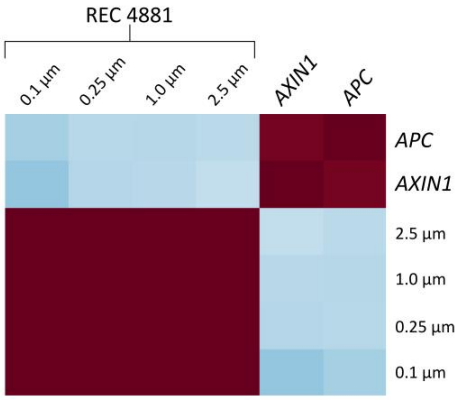
- Targeting ***AXIN1* or *APC* mutant cancers**
- MEK inhibitor, small molecule
- Oral dosing
- **Enrollment ongoing**
- Phase 2 initial readout **expected H1 2025**



AXIN1/APC regulate WNT pathway

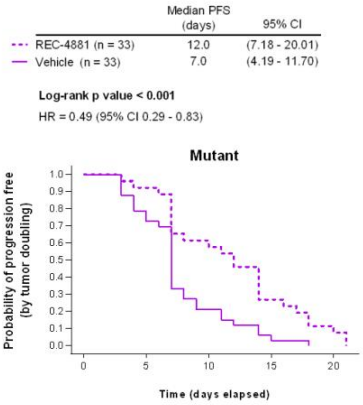
Clinical: AXIN1 or APC

Recursion OS Identified Novel Insight of AXIN1 & APC biology



REC-4881 is phenotypically opposite to the genetic KO of *APC* and *AXIN1* providing a novel mechanism that may restore the disease state modeled by the loss of these genes

Significantly greater antitumor activity in mutant models led to significant PFS benefit



Clinical: AXIN1 or APC

LILAC Clinical Trial: REC-4881 for AXIN1 or APC mutant cancers

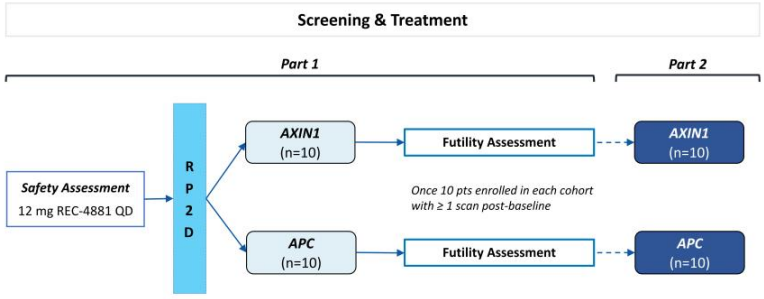
FPI achieved Q1 2024

Enrollment Criteria

- Unresectable, locally advanced, or metastatic cancers
- ≥ 55 years old
- *AXIN1* or *APC* mutation confirmed by NGS (tissue or blood)
- CRC patients must be *RAS / RAF* wildtype
- No MEK inhibitor treatment within 2 months of initial dose
- ≥ 1 prior line of therapy
- ECOG PS 0-1

Outcome Measures

- Primary
  - Safety/tolerability
  - ORR (RECIST 1.1)
- Secondary
  - PK
  - Additional efficacy parameters



Trial Update

- Utilizing genomics & RWD data for patient/site matching
- **Phase 2** initial **readout** expected **H1 2025**

Source : A Study of REC-4881 in Participants With Cancers Which Have an AXIN1 or APC Mutation

REC-3964 for the Prevention of *C. difficile* Infection (CDI)

Target / MOA	Selective *C. difficile* Toxin Inhibitor
Molecule Type	Small Molecule
Lead Indication(s)	Prevention of CDI
Status	Phase 2
Source of Insight	Recursion OS

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Recursion

Clinical: C. difficile

ALDER Clinical Trial: REC-3964 for *C. Difficile*

PREVALENCE & STANDARD OF CARE

~730,000 Diagnosed US + EU5 patients

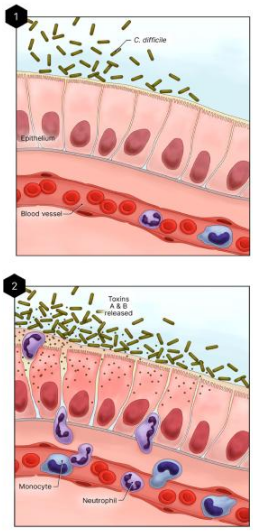
- **Severity of infection varies and can range from mild to severe, requiring colectomy**
  - **>29,000 patients** die in the US each year from CDI
- **Cost burden of up to $4.8bn annually**

TREATMENT PARADIGM

- Standard of care for 1st occurrence: Antibiotics alone
- Recurrence (20-30% of patients) treated with antibiotics ± adjunct therapy (bezlotoxumab IV or fecal transplant)
- REC3964 inhibits the C. difficile toxins and is a non-antibiotic therapy

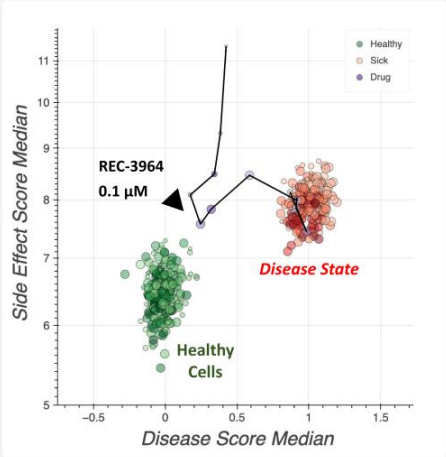
PATHOPHYSIOLOGY & REASON TO BELIEVE

- Selective Inhibitor of C. difficile Toxins
- Recursion's 1st Small Molecule NCE to Reach the Clinic
- Binds and blocks catalytic activity of the toxin's innate glucosyltransferase, but not the host's

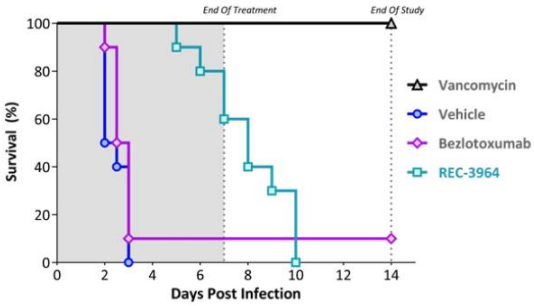


Clinical: C. difficile

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



REC-3964 significantly extended survival over SOC



- REC-3964 potently inhibits toxin B with residual activity against toxin A, while bezlotoxumab is specific to toxin B.
- Significant difference in probability of survival vs bezlotoxumab alone at the end of treatment (**p<0.001**, log-rank test)

Clinical: C. difficile

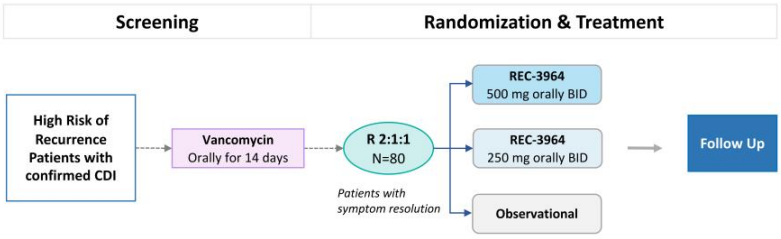
ALDER Clinical Trial: POC Phase 2 REC-3964 in Patients at High Risk of *C. Diff* Recurrence

Enrollment Criteria

- Patients at high risk of recurrence
- ≥3 bowel movements in 24 hours
- Confirm CDI using EIA (toxin)
- No fulminant CDI
- No history of chronic diarrheal illness due to other causes

Outcome Measures

- Primary
  - Rate of recurrence
- Secondary
  - Additional efficacy measures
  - Safety / tolerability
  - PK



Trial Updates

- Phase 1 and DDI studies completed
- **Phase 2 initiation** expected in **Q4 2024,** preliminary **readout** expected by end of **2025**

Novel Insights into **RBM39** Degradation for the Treatment of Select HR-Proficient Solid Tumors

Target / MOA	RBM39 Molecular Glue Degrader
Molecule Type	Small Molecule
Lead Indication(s)	TBD
Status	IND submission in Q3 2024, Phase 1/2 initiation in Q4 2024
Source of Insight	Recursion OS

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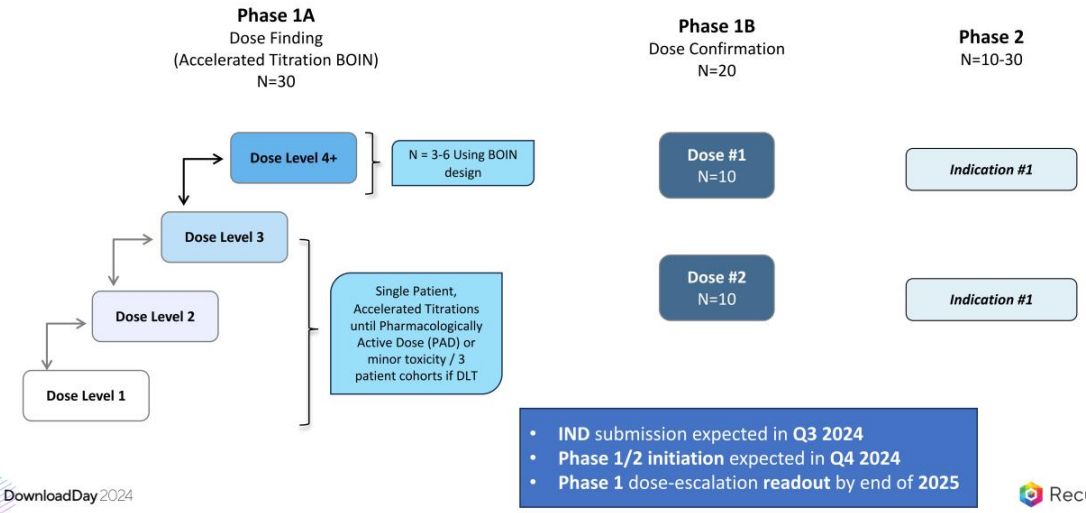
Recursion

Anticipated RBM39 Trial Design

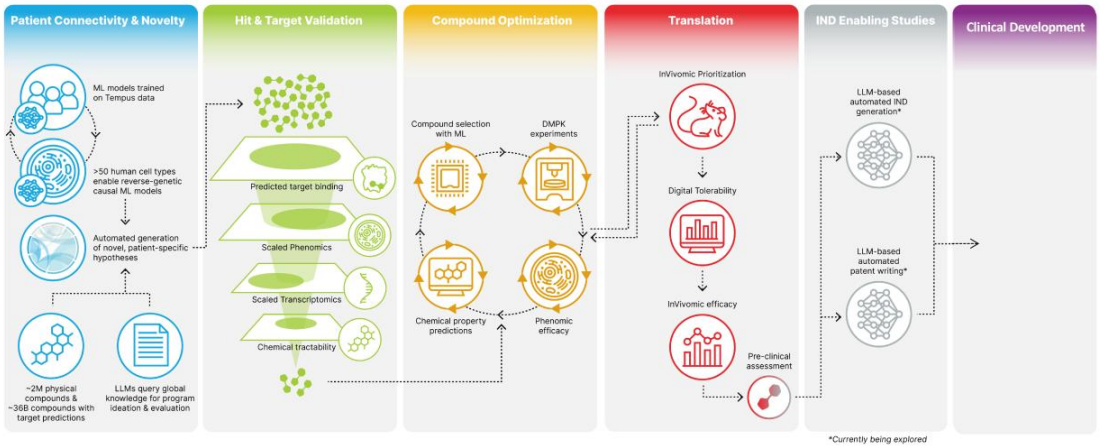
Planned Phase 1/2 study of RBM39 degrader in Biomarker Selected Relapsed Refractory HR-Proficient Solid Tumors



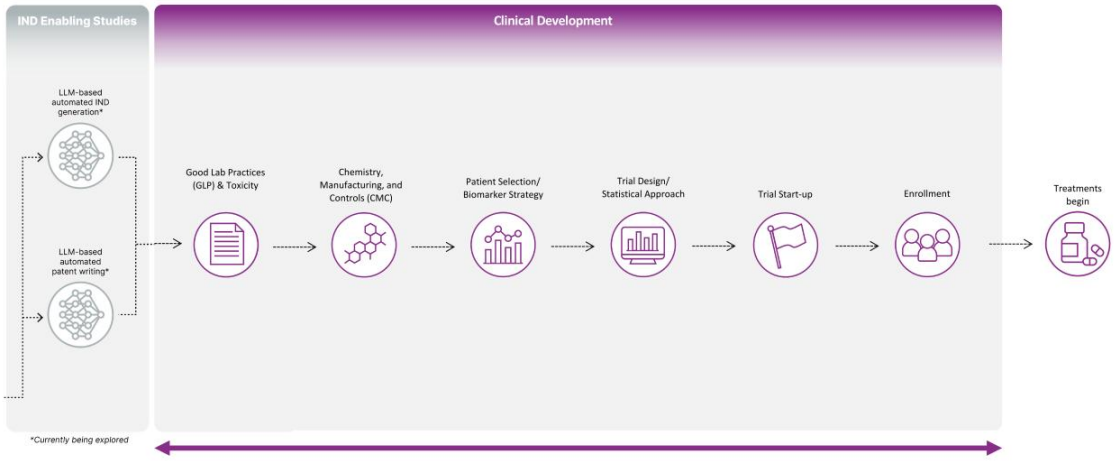
- **IND** submission expected in **Q3 2024**
- **Phase 1/2 initiation** expected in **Q4 2024**
- **Phase 1** dose-escalation **readout** by end of **2025**

Machine Learning:

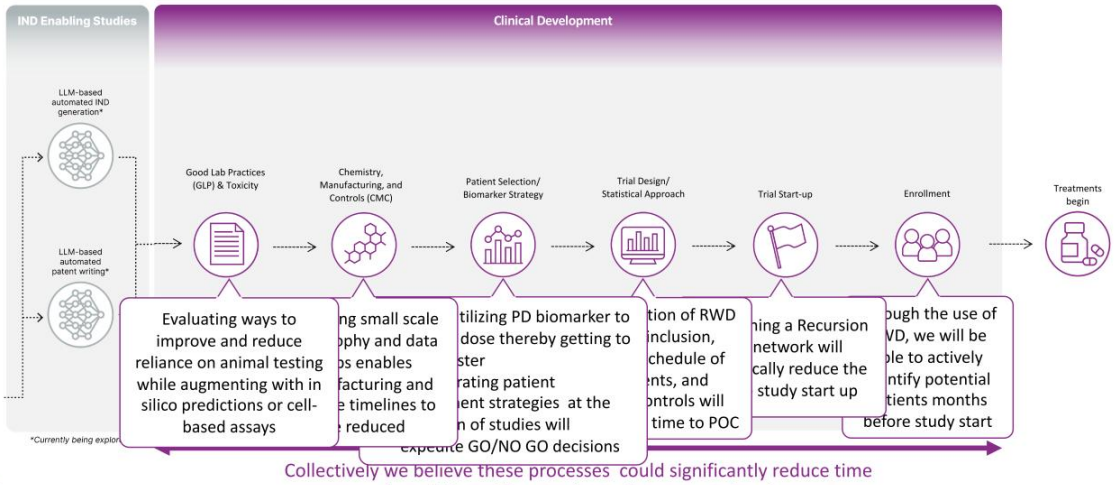
to truly industrialize drug discovery, data and AI solutions must be integrated as modules across many steps
Exciting scientific collaborations span biopharma, tech & data



Industrializing the clinical process, through data and operational efficiency



Industrializing the clinical process, through data and operational efficiency



Collectively we believe these processes could significantly reduce time from IND enabling studies to 1st patient dosed


Recursion
Company & Milestones
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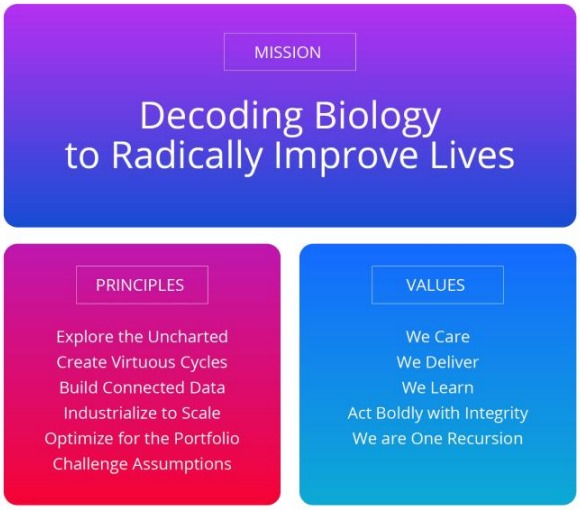
Our Culture and People are Key to Driving Value



Our People

Functional Breakdown

>500 employees

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

~43% Female

~55% Male

~1% Non-Binary

Data shown reflective of Q1 2024, gender statistics include participating individuals

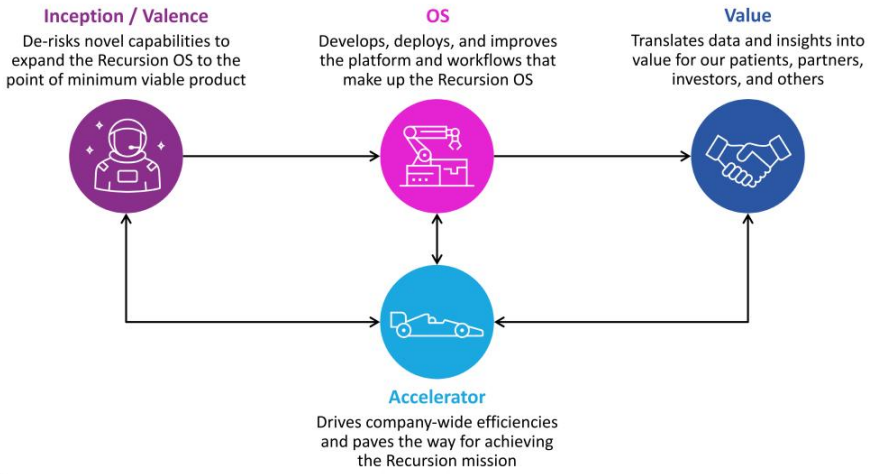
Parity Pledge Signer
gender parity and people of color parity

Locations

Headquarters in **Salt Lake City, Utah** with additional locations in:

- San Francisco, California
- Toronto, Ontario
- Montréal, Québec
- London, England

Our Operating Model – Organizing Ourselves in line with Our Drug Discovery Process



Milestones: Pipeline – 7 Clinical Trial Readouts Expected in ~18 Months

Pipeline

- **CCM: Ph2** readout expected in **September 2024**
- **NF2: Ph2** safety & preliminary efficacy expected in **Q4 2024**
- **FAP: Ph2** safety & preliminary efficacy expected in **H1 2025**
- **AXIN1 or APC Mutant Cancers: Ph2 FPI** achieved in **Q1 2024** with safety & preliminary efficacy expected in **H1 2025**
- ***C. difficile* Infection: Ph2 initiation** expected in **Q4 2024** with preliminary **readout** expected by end of **2025**

- **Target RBM39 / HR-Proficient Cancers: IND** submission expected in **Q3 2024** and **Ph1/2 initiation** expected in **Q4 2024** with **Ph1 dose-escalation readout** by end of **2025**
- **Target Epsilon** (novel target in fibrotic diseases): **IND** submission expected in **early 2025** with **Ph1 healthy volunteer readout** by end of **2025**

- **Dozens of internal & partner programs** in early stages with first **LLM & causal model driven programs entering pipeline**

SYCAMORE

POPLAR

TUPELO

LILAC

ALDER

Milestones: Partnerships & Platform

Partnerships

- **Roche & Genentech:** validation **program option exercised** for 1st validated hit series in oncology, potential **program & map options** on the near or very near-term
- **Bayer:** delivered **multiple oncology data packages,** on track to complete **25 unique data packages** in **Q3 2024**, initiated and advancing **1st joint project** towards lead series nomination, potential near-term **program options**, agreed to be **1st beta-user of LOWE** for drug discovery and development
- **Tempus & Helix:** building large-scale **causal AI models** to generate **target hypotheses** across cancer and other disease areas, exploring **novel NSCLC targets**
- Potential for **additional partnership(s)** in large, intractable areas of biology

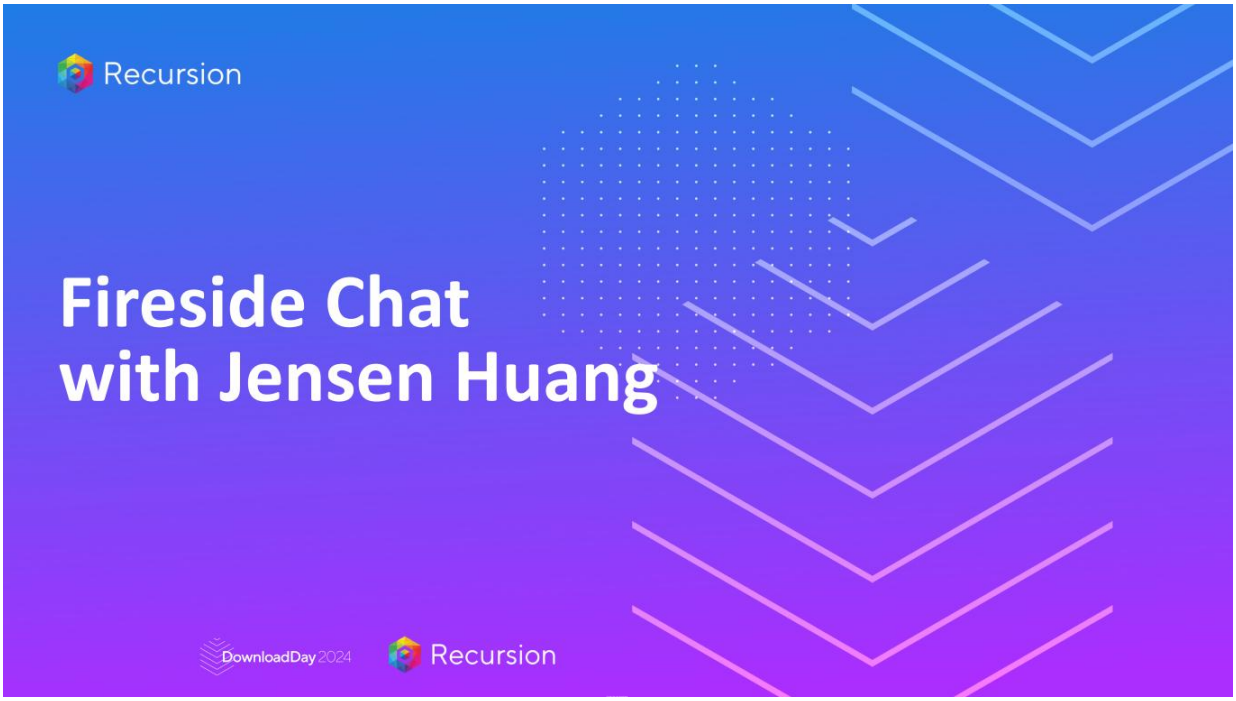
Platform

- Built our 1st genome-scale **transcriptomics KO map**, moving towards **multiomics foundation models**
- **Active learning** and exploration of **proteomics, organoids, spheroids, & automated synthesis**
- Potential to **make some data and tools available** to biopharma and commercial users
- OS moving towards **autonomous discovery**

Strong Financial Position

~$296M in cash Q1 2024

Cash refers to cash and cash equivalents at the end of Q1 2024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with Jensen Huang
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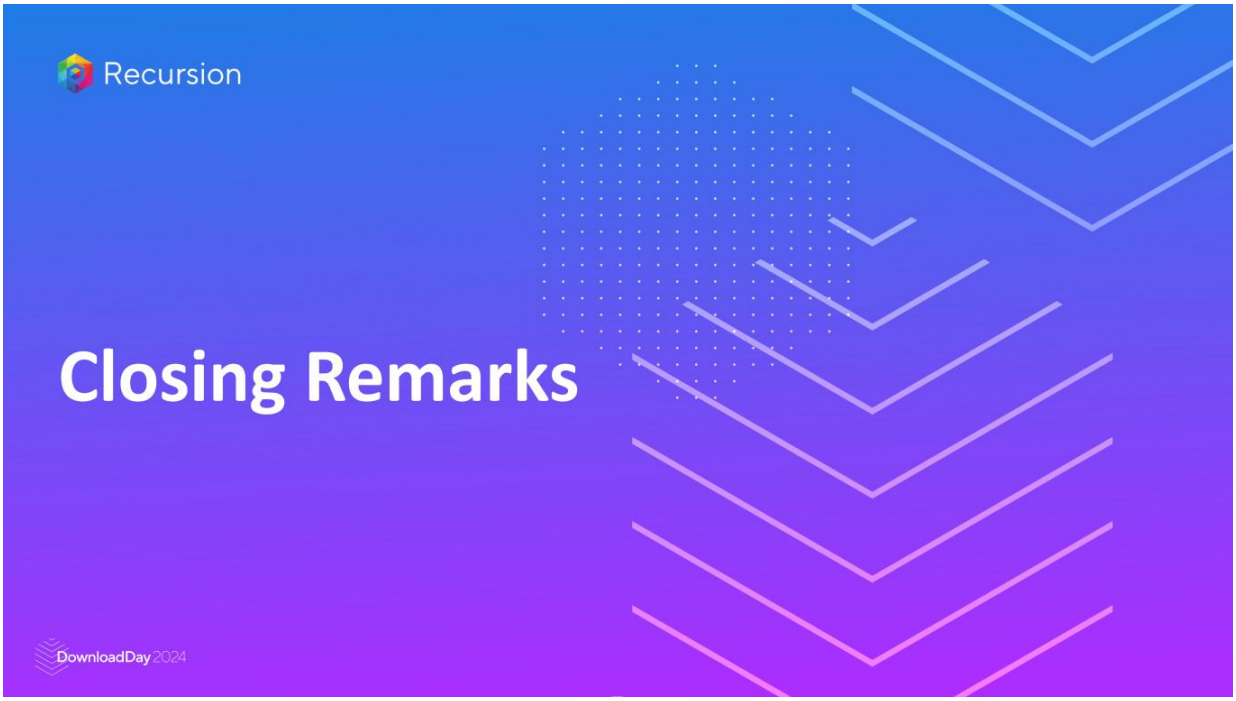
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Closing Remarks
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Our Hopes for Today

Let you get a feel for Recursion and hear from expert partners from outside Recursion about the current and potential future impact of our work

Help define what we view as a tipping point moment as BioTech transitions to TechBio and understand why Recursion is uniquely positioned to take advantage of this

Share details and updates on our:

- Pipeline – with 7 clinical trial readouts expected in the next ~18 months
- Partnerships - with potential near term options on both maps and programs
- Platform - with industry-leading data generation and compute