LEAP INTO THE FUTURE OF DRUG DEVELOPMENT

THE NEXT GENERATION OF AI HAS LANDED

BULLFROGAI

One giant leap for mankind.

Stock Symbol: **NASDAQ: BFRG**

Forward-Looking Statements

This presentation contains forward-looking statements. In addition, from time to time, we or our representatives may make forward-looking statements orally or in writing. We base these forward-looking statements on our expectations and projections about future events, which we derive from the information currently available to us. Such forward-looking statements relate to future events or our future performance, including: our financial performance and projections; our growth in revenue and earnings; and our business prospects and opportunities. You can identify forward-looking statements by those that are not historical in nature, particularly those that use terminology such as "may," "should," "expects," "anticipates," "contemplates," "estimates," "believes," "plans," "projected," "predicts," "potential," or "hopes" or the negative of these or similar terms. In evaluating these forward-looking statements, you should consider various factors, including: our ability to change the direction of the Company; our ability to keep pace with new technology and changing market needs; and the competitive environment of our business. These and other factors may cause our actual results to differ materially from any forward-looking statement. Forward-looking statements are only predictions. The forward-looking events discussed in this document and other statements made from time to time by us or our representatives, may not occur, and actual events and results may differ materially and are subject to risks, uncertainties and assumptions about us. We are not obligated to publicly update or revise any forward-looking statement, whether as a result of uncertainties and assumptions, the forward-looking events discussed in this document and other statements made from time to time by us or our representatives might not occur. See offering documents for further risks and disclosures. Past performance is not indicative of future results. There is now guarantee that any specific outcome will be achieved. Investments may be speculative, illiquid and there is a total risk of loss.

The Cost of Drug Development Failures

The high failure rate in drug development highlights the urgent need for more efficient and innovative R&D. Boosting success rates can cut costs, improve access to treatments, and ease the financial burden on taxpayers.

"Transformational change" is needed to improve ROI on pipeline programs

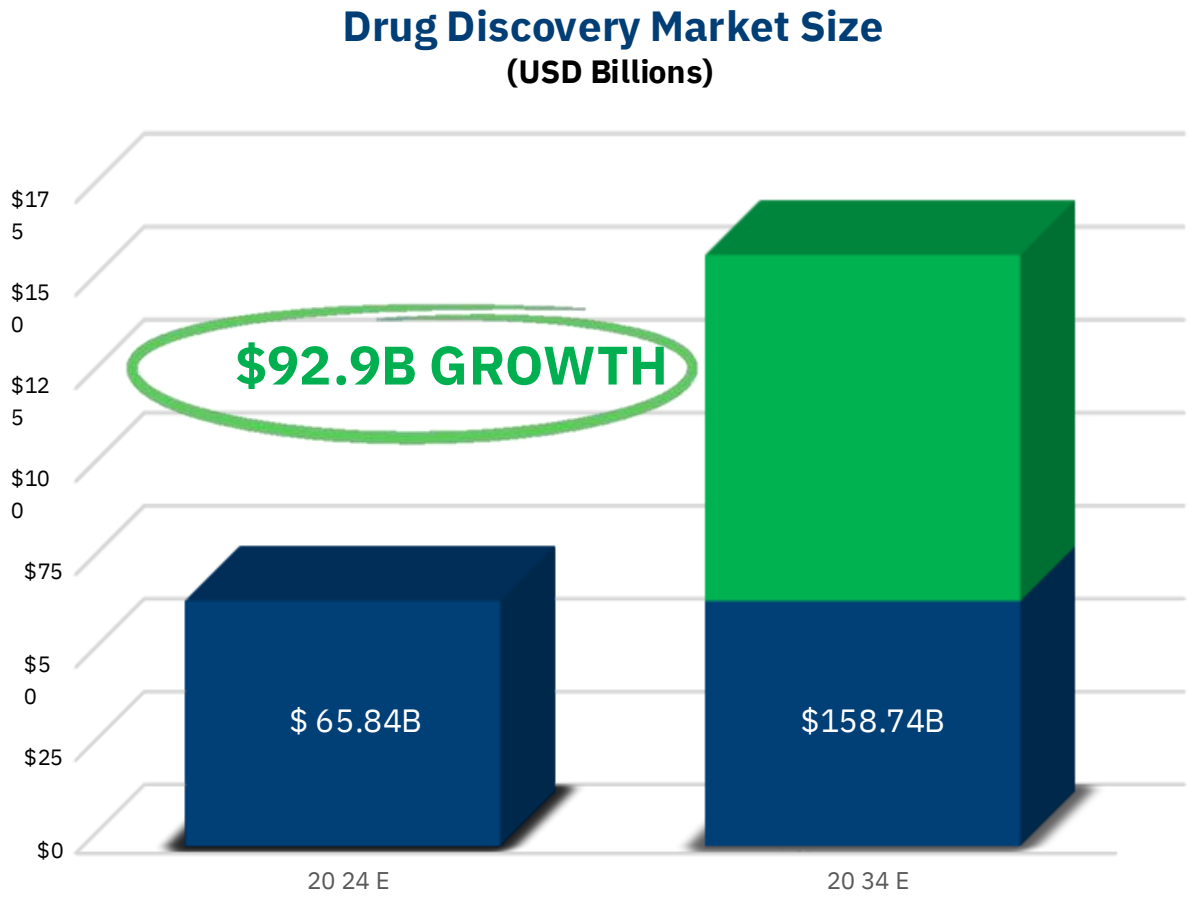
Forecast peak sales have declined 30% over the last decade

Total R&D costs have increased, currently $2.28B from discovery to launch

- April 2024 Deloitte Report

Overall Drug Discovery Market Size

CAGR: 9.20%



Source: Precedence Research, October 2023
https://www.precedenceresearch.com/drug-discovery-services-market

What Role Does AI Play In Drug Development?

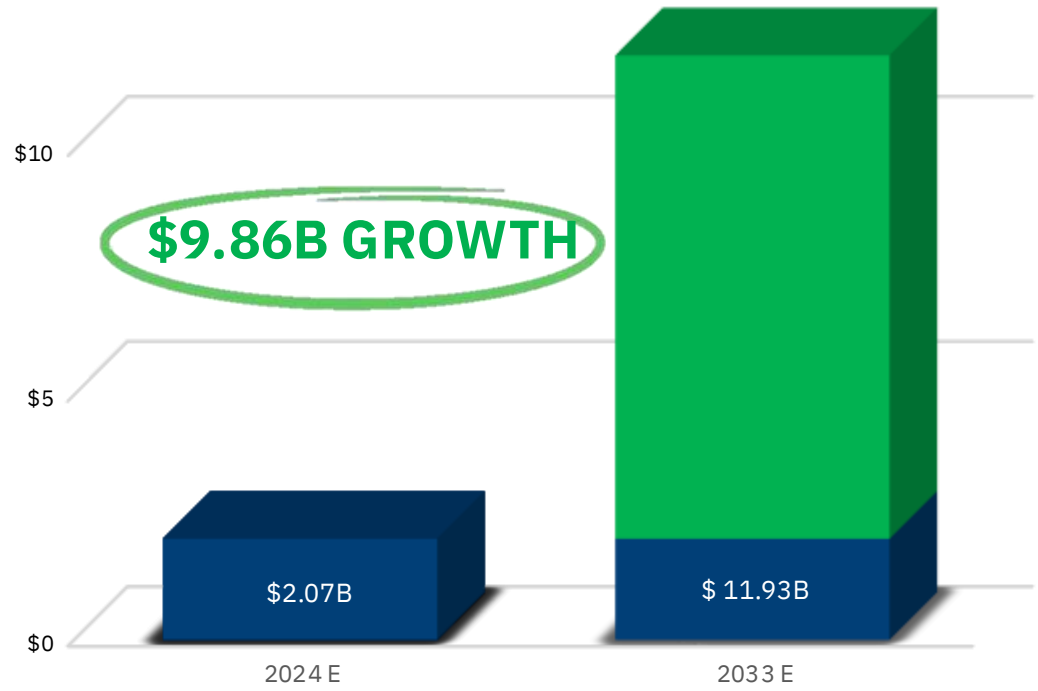
The integration of high-throughput technologies and computational tools has further accelerated spending in this area, enabling more efficient and comprehensive target discovery

The drug discovery outsourcing market valued at $3.3 billion in 2021

is projected to grow at a compound annual growth rate

(CAGR) of 7.6% from 2022 to 2030

Artificial Intelligience (AI) in Drug Discovery Market Size **(USD Billions)**



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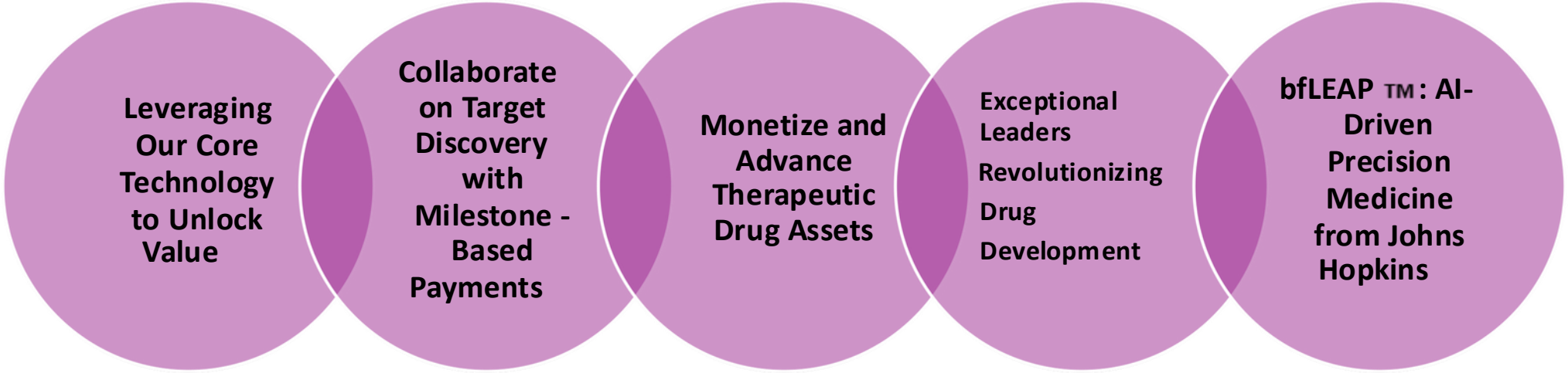
Major Deals Done In AI-Powered Drug Discovery

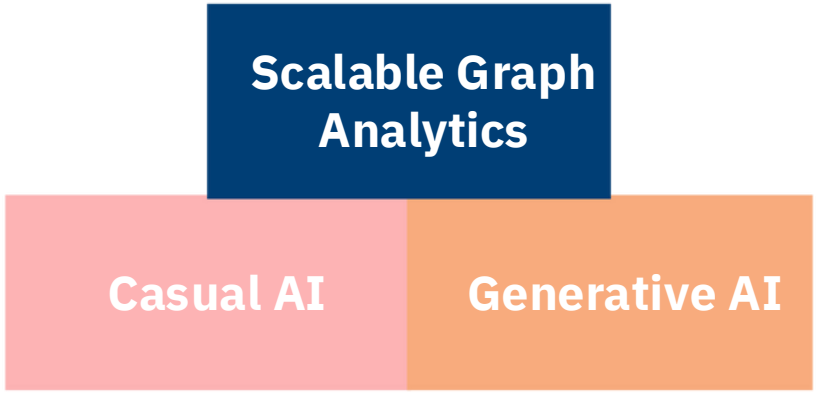
Sanofi and Atomwise	Eli Lilly and Isomorphic Labs	Roche and Recursion	AstraZeneca and Absci	Novartis and Generate
$20M Upfront and Potential $1B+ in Milestones	Partnership Worth Approximately $3B	Partnership Worth Up to $12B	Successful Drug Targets Identified with $247M Upfront Payment	Partnership Worth Up To $1B with a $50M Upfront Payment

Business Model

Using AI to discover drug targets that drive disease.



Building Blocks of our Solution – bfLEAP



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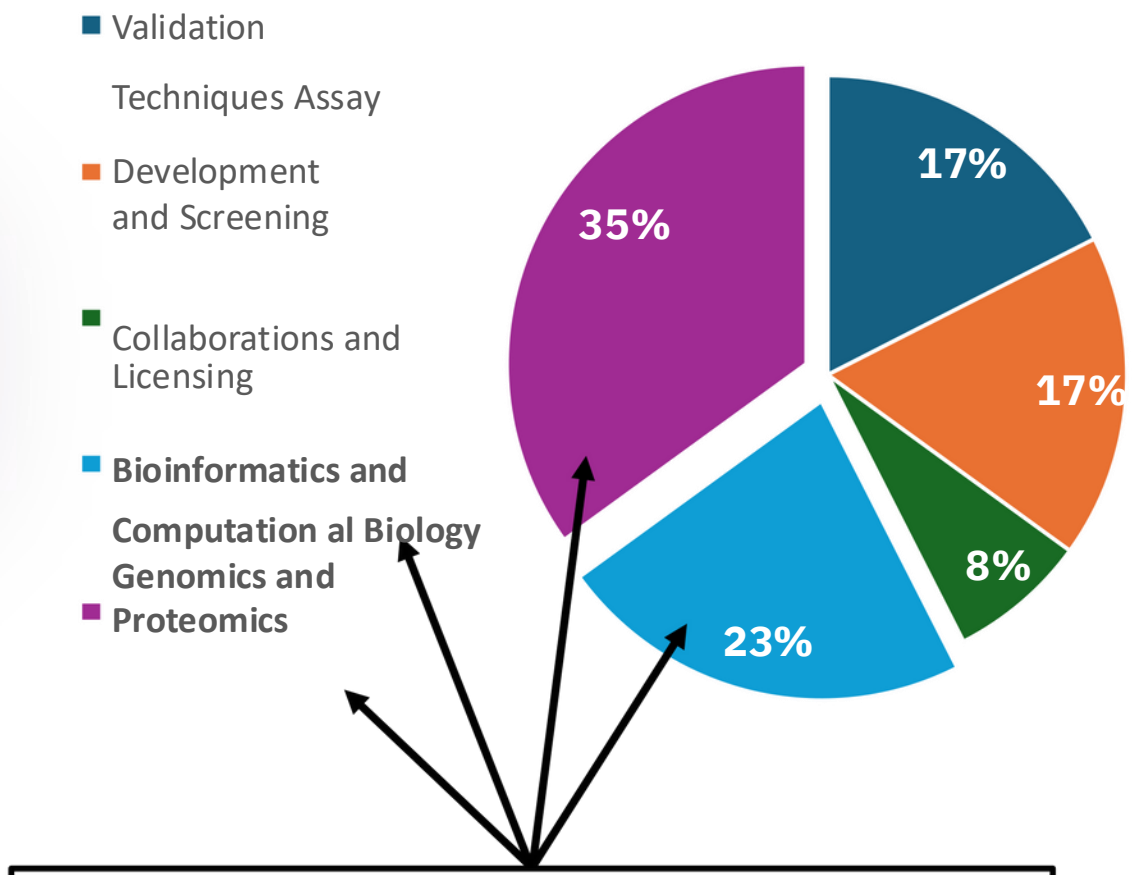
Investment Highlights

- Exclusive neuropsych data partnership with the Lieber Institute provides access to the largest brain bank in the world
- Leveraging the JHU Applied Physics Lab's breakthrough AI technology to access difficult drug targets
- Massive total addressable market expected to grow at an 9.2% CAGR, to reach $158B by 2034
- Macro tailwinds driven by rapidly rising drug development costs and a lengthy regulatory pathway
- Lean operating model expected to self-fund cash runaway for 10+ years with a single bio bucks deal

How is Money Spent in AI Drug Discovery?

- ☑ Target Identification and Validation
- ☐ Lead Discovery and Optimization
- ☐ Preclinical and Clinical Development

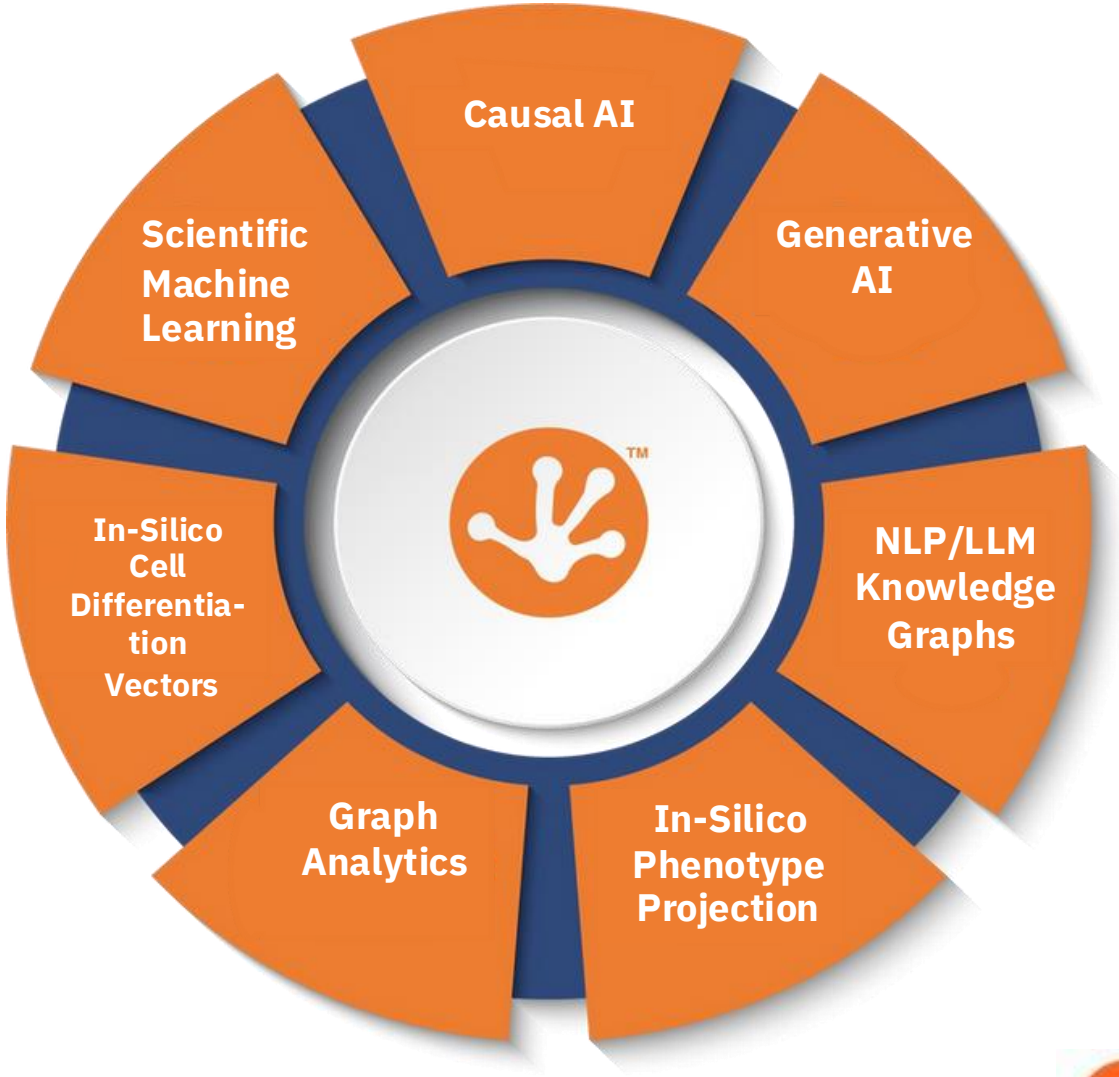
AI in Drug Discovery Market Segmentation



Approximately $1.2B Spent In 2024

Revolutionizing Drug Discovery with Explainable AI

- **Explainable results** of complex datasets.
- **Higher accuracy** in predicting outcomes.
- **Faster identification** of drug targets.
- **Reduced costs** in preclinical and clinical development.



Proprietary Technology Pioneering Drug Target Identification

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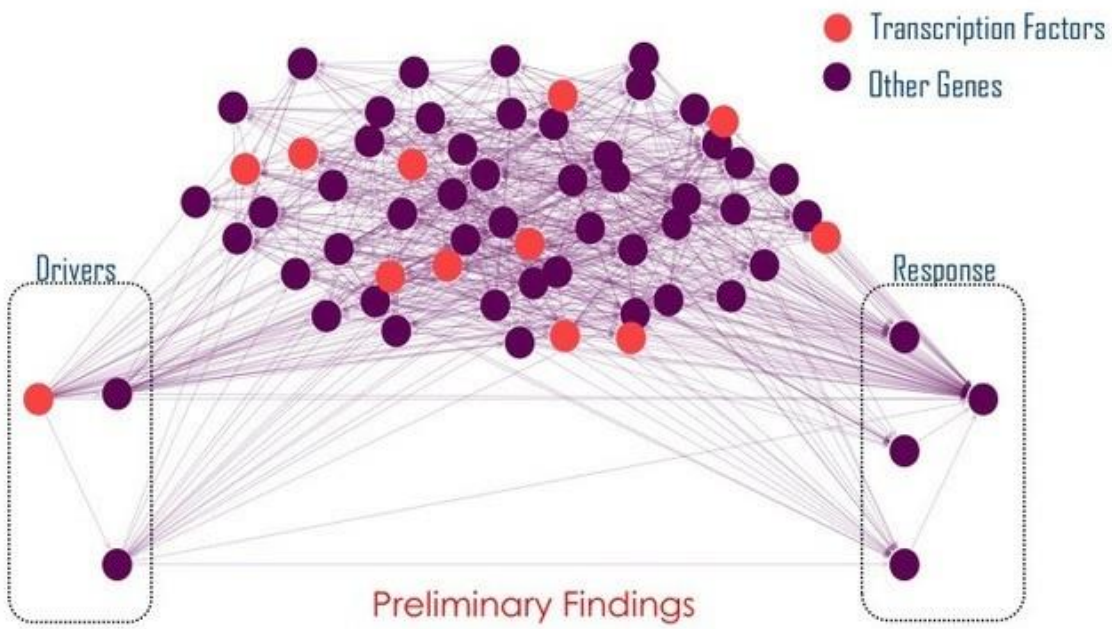
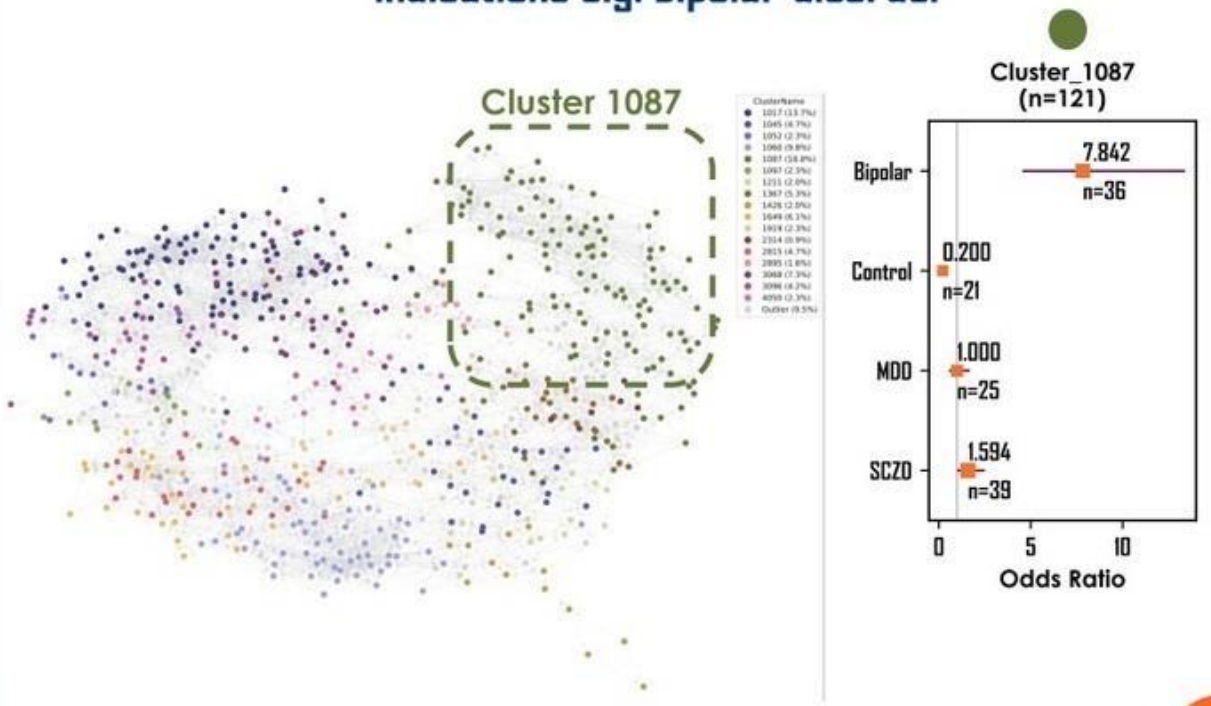
Proprietary ensemble approach combines clustering graph analytics, generative AI, and causal AI for enhanced predictive performance

Causal AI finds gene drivers and responses



Clustering identifies patients with enrichment for certain indications e.g. bipolar disorder



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AI’s advanced data analysis, predictive modeling, and automation capabilities streamline the drug discovery process, making it faster and more cost-effective.

As technology continues to evolve, AI’s role in transforming pharmaceutical R&D will only become more prominent, driving

substantial market growth.

BullFrog Data Networks ™: Transforming Data into Insights

The bfLEAP ™ platform integrates multimodal data—clinical trial, EMR, claims, "-omics," and real-world data (RWD)—to build custom networks that uncover hidden insights using unsupervised machine learning.

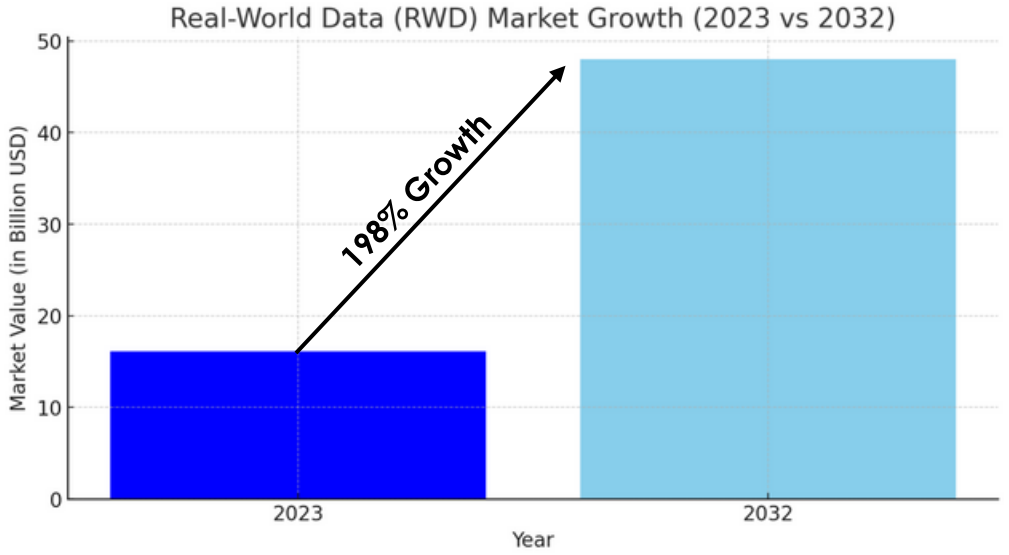
Key Stats

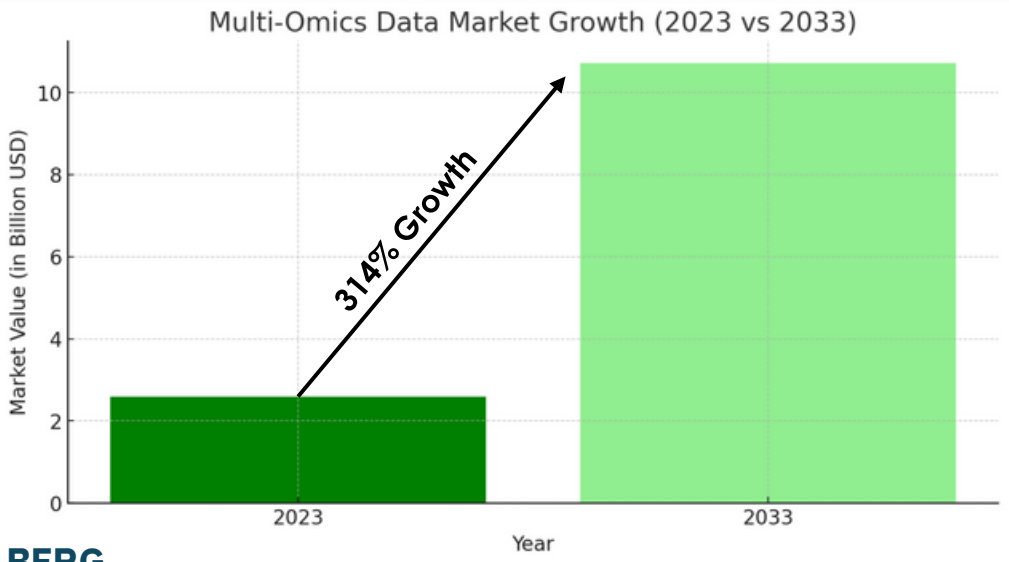
Biopharma R&D: >6,000 companies and >22,000 drugs in global pipelines.

Data Market Growth:

RWD: $16.13B in 2023 $48.02B by 2032 (13.1% CAGR)

Multi-Omics: $2.59B in 2023 $10.72B by 2033 (15.26% CAGR)





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Unlocking New Breakthroughs and IP through Strategic Innovation

- 3+ Years exclusive partnership to commercialize LIBD brain data discoveries.
- Identifying molecular drivers in neuropsychiatric disorders for therapies.
- Expanding IP portfolio by safeguarding novel target discoveries.
- Commercialization through licensing, partnerships, and direct development.
- 2,800 brain samples across psychiatric and control groups.
- Pinpointed molecular pathways in MDD, Bipolar Disorder, and Schizophrenia, identifying new drug targets.
- Clustered subjects by biological data, not behavioral diagnoses.
- Enables targeted, effective, personalized treatments for Bipolar Disorder patients.
-

LIBD
LIEBER INSTITUTE for BRAIN DEVELOPMENT
MALTZ RESEARCH LABORATORIES

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AI Discovery Pipeline

Neuroscience

Schizophrenia, Bipolar, and MDD

AI Approach: graph analytics and Causal AI leveraging LIBD data

Targets: Multiple causal targets have been identified

Publications: Experimentally validated Causal AI methods published in top journals

Next Milestone: Strategic partnership for target discovery and validation

Pre-Alzheimer's Disease

AI Approach: graph analytics and Causal AI leveraging LIBD data

Targets: Molecular subtypes and targets to be identified

Publications: Experimentally validated Causal AI methods published in top journals

Next Milestone: Strategic partnership for target discovery and validation

Obesity and Chronic Liver Diseases

BF-114

AI Approach: Causal AI analysis of single-cell transcriptomics

Therapy: BF-114: SPTBN1 siRNA

Target: SPTBN1 gene codes for β2-spectrin

Publications: Recent study shows BF-114 can prevent the progression of liver diseases

Next Milestone: Analysis of single-cell data from animal models and human patients

Colorectal Cancer

Oncolytic Virus

AI Approach: Targets identified using graph analytics

Therapy: Modified HSV-1 oncolytic virus

Targets: Identified through differential expression and graph analytics

Next Milestone: IND-enabling studies

Glioblastoma

BF-222

AI Approach: Trial design informed by AI-enabled patient clustering

Therapy: BF-222: Mebendazole Formulation

Targets: Multiple targets including microtubule

Publications : Two phase 1 studies have been conducted in brain cancer

Next Milestone: Strategic partnership

BF-223

AI Approach: Disease Mechanistic Understanding

Therapy: BF-223: Mebendazole Prodrug (NCE)

Targets: Multiple targets including microtubule

Next Milestone: IND-enabling studies

The Team

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