

# GNQ

i n s i l i c o

*Genomics, AI and Quantum Computing for Drug Discovery and Development*

**Corporate Presentation**  
**March 2024**

Website: <https://www.gnqin.com>

# Disclaimer

**Forward-looking Statements.** The information contained in this presentation includes “forward-looking statements.” All statements, other than statements of historical fact included in this presentation, regarding our strategy, future operations, financial position and outlook and plans and objectives of management are forward-looking statements. Particularly, all statements regarding our expectations of future results, performance, achievements, milestones, prospects or opportunities or the markets in which we operate are forward-looking statements.

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These forward-looking statements and other forward-looking statements contained herein are based on our opinions, estimates and assumptions in light of our experience and perception of historical trends, current conditions and expected future developments, as well as other factors that we currently believe are appropriate and reasonable in the circumstances; however, there can be no assurance that the underlying opinions, estimates and assumptions will prove to be correct, and such forward-looking statements are subject to a number of significant known and unknown risks, uncertainties, assumptions and other factors that could cause actual results to differ materially from those expressed or implied by such statements. Important factors that could cause actual results to differ materially from our expectations include: (i) our ability to meet our relevant milestones for our product pipeline; (ii) the extent of adoption of our technology and/or products and the realized benefits from such adoption; (iii) the impact of competition, (iv) our ability to attract and retain key personnel, including our proposed management team; (vi) our ability to execute on and finance our growth plans; (v) our ability to perform and progress our research and development and our plans for future product development; (vi) our ability to maintain our strategic partnerships and capitalize on product developments generated through our research and development efforts; (vii) our ability to obtain and maintain existing financing on acceptable terms; (vii) currency exchange and interest rates; (ix) changes and trends in the pharmaceutical and healthcare industry or the global economy; (x) changes in the size of target markets for our product candidates; (xi) our ability to maintain, expand and protect our intellectual property portfolio; (xii) changes in laws, rules, regulations, and global standards relating to our industry; and (xiii) completion of the issuance of convertible notes as outlined herein.

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## OUR VISION

To improve global healthcare by accelerating the world's transition to **precision medicine**

## OUR MISSION

To improve the success of drug discovery and development through **genomics, AI and quantum computing**

# Executive Summary



## Introduction

*The life sciences industry is under pressure due to increasing costs and time required to bring the average drug to market. Significant improvements in drug discovery and development possible through developments in genetics, AI and quantum computing.*

**GNQ Insilco, in collaboration with IBM' is developing a unique digital biological twin based on GNQ's proprietary genomic and AI platform as well as IBM's technical support including quantum computing.** This platform will be co-marketed with IBM to leading global life sciences companies, many who are existing clients of IBM.



## Simulation Model Results

- **Initial results of the first simulation models are very promising and appear to demonstrate highly comparable levels of accuracy to observed results in real world data (95 percent accuracy).**
- **Simulation can optimize the dosage and epigenetic influences for diverse populations with differing genetic profiles.**
- **Platform has the potential to radically improve safety, efficacy, and time to market for the drug discovery and development industries.**
- **GNQ now in discussions with leading life sciences companies to apply platform to a range of therapeutic areas.**



## The Opportunity

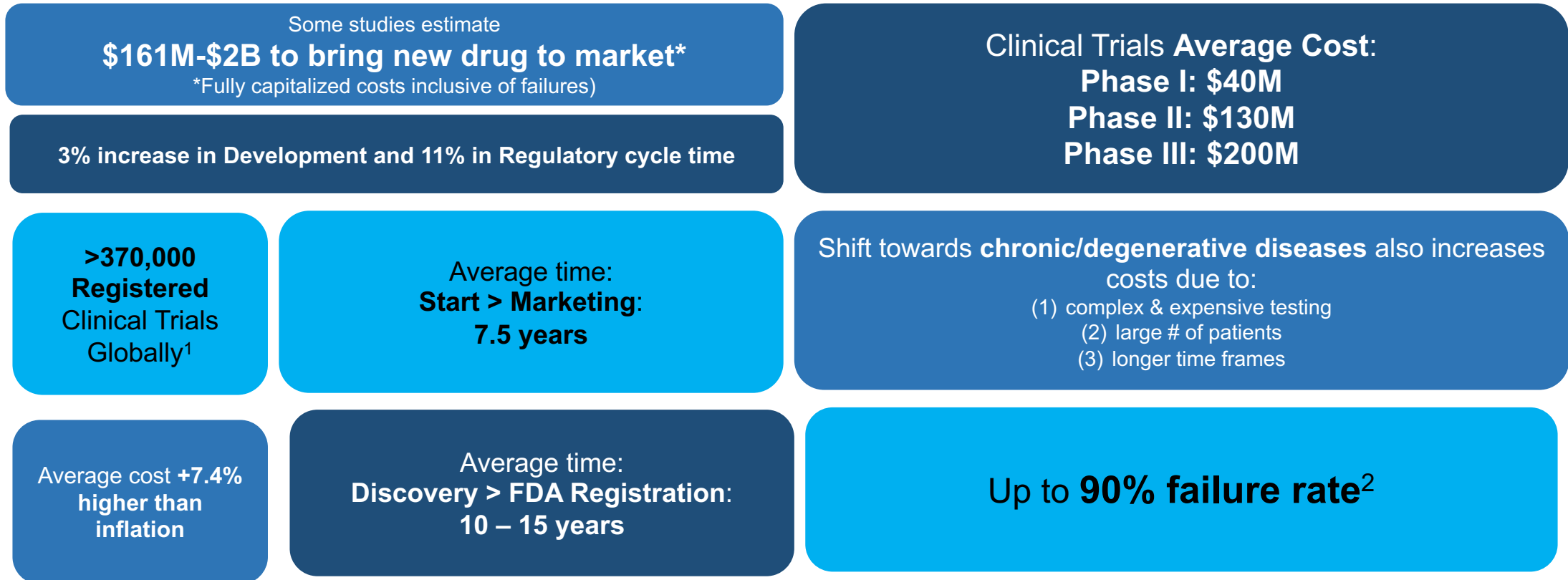
**First mover advantage** in rapidly growing drug discovery and development market with targeted **platform licensing opportunities** and collaborations with key **strategic partners** in **life sciences and healthcare industries.**

*Platform uniquely combines functional genomics, pharmacology and chemistry using next generation AI/quantum technologies to offer in silico clinical trials and drug discovery as a service.*

*Significantly reduce drug development time and increase the probability of success in development of therapies in a wide number of targeted areas.*

# Drug Discovery and Development – The Challenge

- The **life sciences** industry is **under pressure** due to **increasing costs** and **time** required to bring average drug to market.
- Traditional methods of conducting clinical trials **may not be sustainable** as **high rates of failure exceed revenues** from new drugs.



(1) "Clinical Trials Trends, Charts, and Maps." [ClinicalTrials.gov](https://clinicaltrials.gov). US National Library of Medicine, 15 July 2021. Web. 17 July 2021. <<https://clinicaltrials.gov/ct2/resources/trends>>.  
(2) "How to Improve on the 90% Failure Rate in Drug Discovery." Labskin. 12 July 2019. Web. 17 July 2021. <<https://www.labskin.co.uk/how-to-improve-on-the-90-failure-rate-in-drug-discovery/>>.

# Digital Twin Platform

## KEY FEATURES

- Development of biological digital twins embedded with proprietary genetic and epigenetic analytics.
- Expected to dramatically cut costs as well as reduce development time for new therapeutics.
- Potential annual savings of billions of dollars in research and development costs for some of the world's leading life science companies.

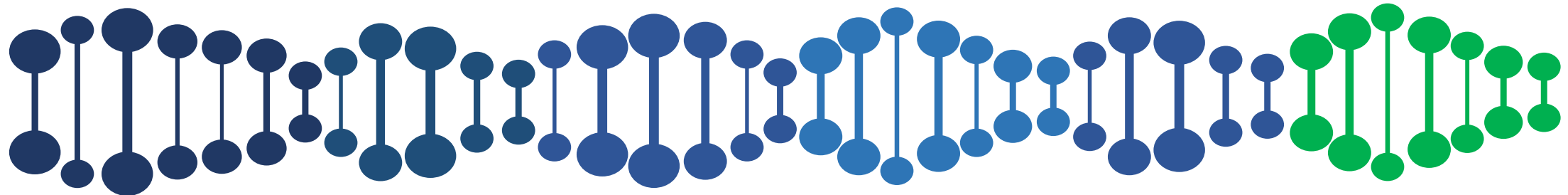


## KEY COLLABORATIONS

- IBM: Collaboration to develop digital twin and incorporate its groundbreaking quantum computing to platform. Will market together to major life science companies.
- Insight Hospital: Will incorporate digital twin in hospital's newly developed electronic medical records system as well as in clinical studies and trials.
- Life Sciences Companies: Developing proposals for leading life sciences companies to apply platform including a study for T cell exhaustion in oncology.

# Proprietary Genomic Insights

GNQ has exclusive license to use proprietary genomic insights from parent company in area of in silico clinical trials. Intellectual property relates to how systems of genes interact with epigenetic factors to drive key metabolic pathways and cellular behaviour.



1

Start with the **CELLULAR BEHAVIORS/ PHENOTYPES** that we want to study.

2

Map and define the relevant **CELLULAR PATHWAY(s)** responsible for those cellular behaviors.

3

Determine the contributing genes to these pathways and create a **GENOMIC PATHWAY(s)** map.

4

Determine if different **VARIATIONS (SNPs)** of genes impact the genomic pathway(s).

5

Determine and map all possible **EPIGENETIC INFLUENCES** on the pertinent genomic variations and pathway(s).

6

Apply these insights to predict "**In Silico**", the safety and efficacy outcomes of target molecules, and optimize clinical trial design.

Insights derived from 15,000+ case studies over past decade with leading geneticist whose research collaboration on discovery of Copy Number Variation was short-listed for a Nobel Prize in Physiology/Medicine

# AI and Quantum Computing

Platform will leverage key exponential technologies including generative AI as well as IBM's quantum computing to revolutionize drug discovery and development.

## ARTIFICIAL INTELLIGENCE

- AI models to infer knowledge gaps and generate hypotheses.
- Identifying genes associated with specific cellular behaviors.
- Speed up the research process and ultimately enhance MNH's genomic and epigenetic insights.
- Generating insights from large amounts of structured and unstructured technical literature.
- Developing and deploying federated learning models to derive insights from disparate health data without compromising security and privacy of health data.



## LEVERAGING QUANTUM COMPUTING

Combine proprietary genomics insights, AI platform with IBM quantum computing in the hybrid cloud for number of applications:

- Design target drug molecules personalized by genomic profiles.
- Provide genomic, epigenetic and microbiome-based insights in a point of care setting to improve diagnostic predictions in hormonal, cardiovascular, metabolic and auto immune disease.
- Improve clinical trials outcomes by providing genomic stratification in cohort selection.
- Simulate pharmacokinetics in silico (virtually) to improve drug safety and efficacy predictions before conducting clinical trials.

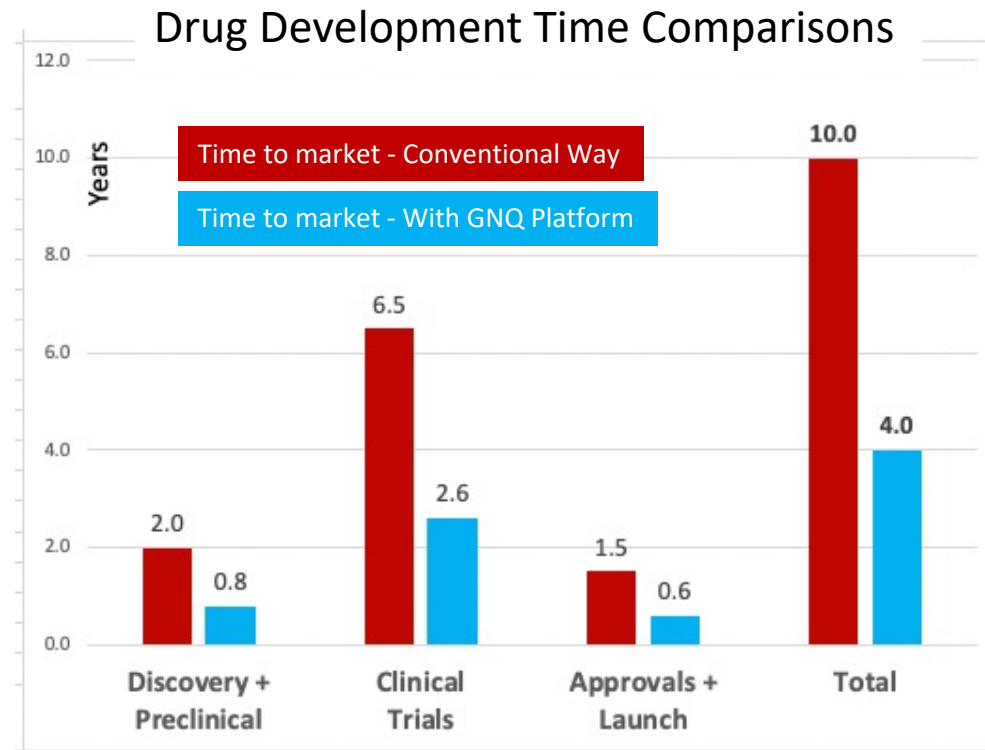
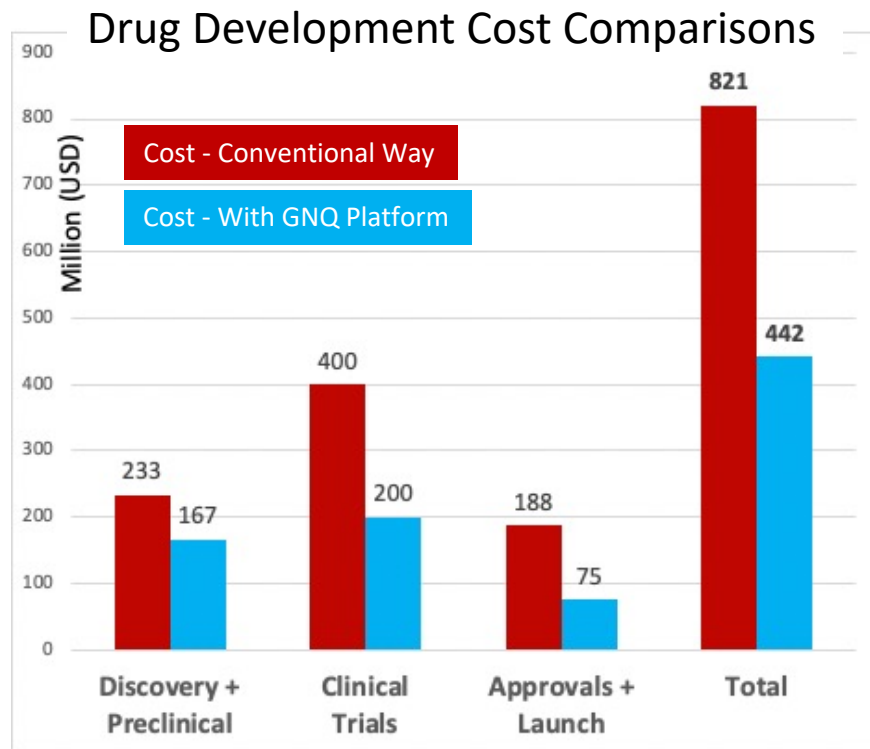


# Key Advantages of Platform

- 1. Rapid Drug Development:** In silico clinical trials enable us to expedite the drug development process by simulating and predicting drug responses, significantly reducing the time required for clinical trials and the overall cost of the trials.
- 2. Improved Safety and Efficacy:** In silico clinical trials enhance our understanding of drug mechanisms, allowing for the prediction of adverse effects and optimization of drug dosages, thereby increasing safety and efficacy.
- 3. Personalized Medicine:** Our generative AI platform simulates the effects of drugs across diverse profiles of human digital twins (digital replicas of real people), enabling the development of targeted therapies and facilitating personalized medicine across disparate and diverse populations.
- 4. Equitable Representation:** Our drug simulation process is inherently designed to include genetic, epigenetic and lifestyle variances based on ethnic and minority populations, thereby ensuring equitable representation of underserved minorities in the drug development process. We have recently partnered with a hospital group that caters almost exclusively to the underserved communities of Flint, Michigan, Southside of Chicago, etc.



# Cost/Time Advantages

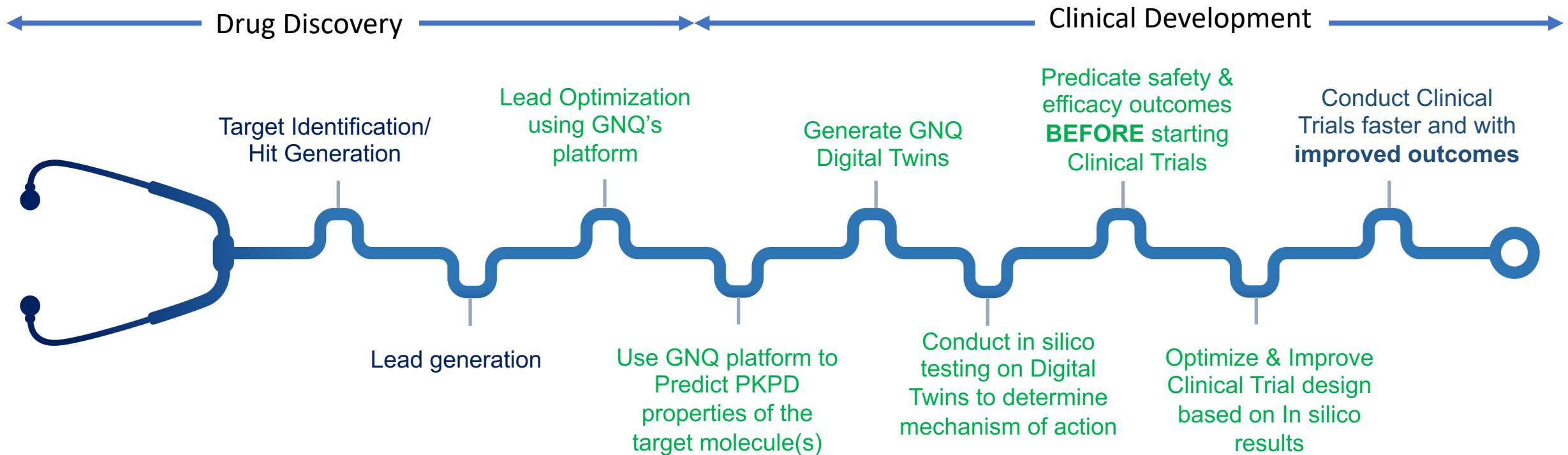


## Financial Overview

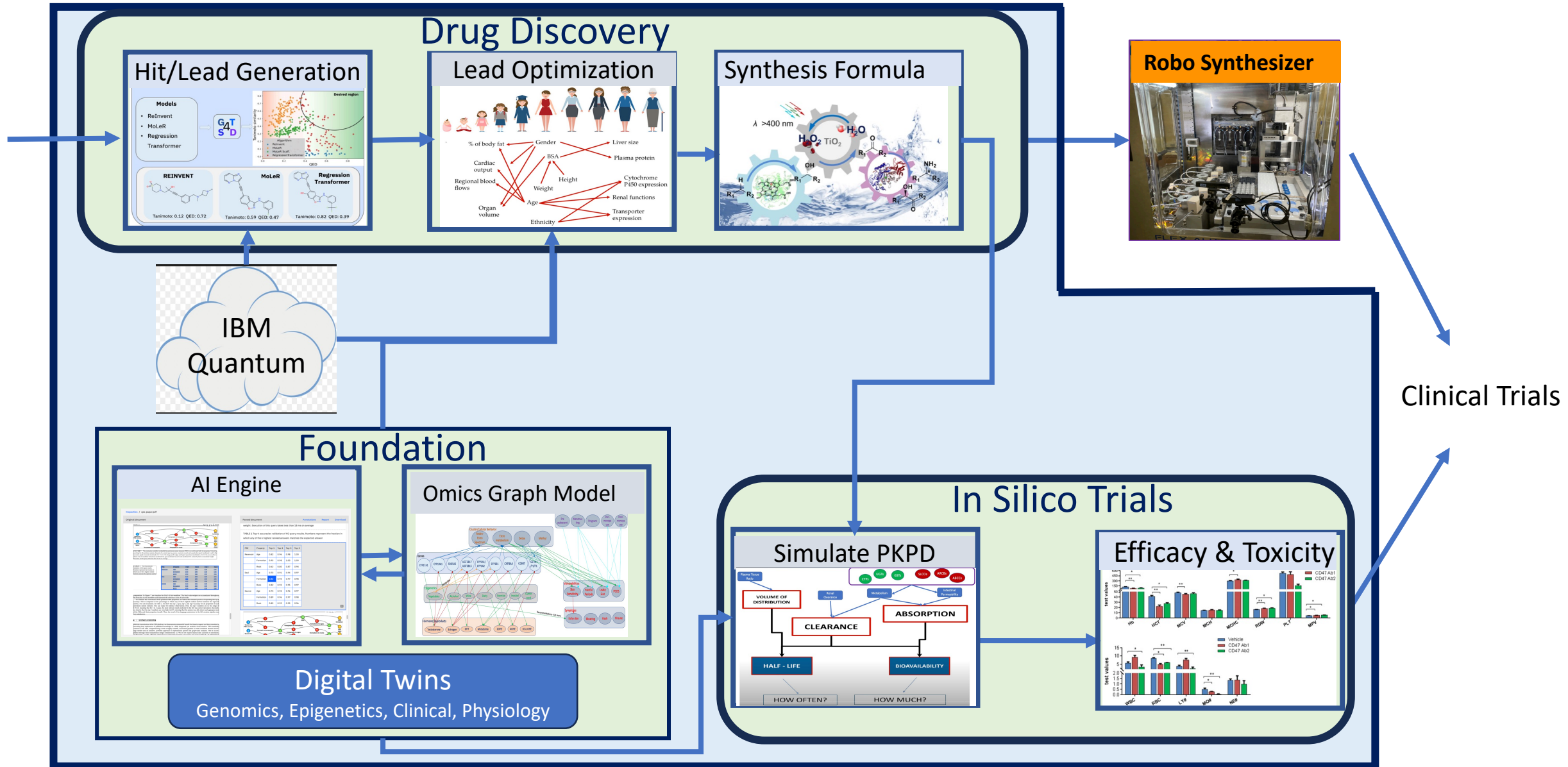
- Cost Reduction by 50%
- Significantly improved probability of success for the trial
- Billions of dollars of annual savings for major life science companies
- \$10M+ expected revenue per clinical trial (70-80% share for GNQ)
- Faster to Market by 60%

# The Future of Drug Discovery and Drug Development

- Life sciences company exploring innovative ways to improve probability of success and reduce costs for drug discovery and development.
- Rapid growth in generative AI drug discovery companies over past several years as well as introduction of companies focusing on in silico clinical trials.
- No platform exists such as GNQ's platform which is based on proprietary genomic insights, AI and quantum.



# Platform Overview



# Timelines

Q4  
2023

Q1  
2024

Q2  
2025

Q4  
2025

## Foundation

- Signed MOU with IBM
- Partnership w. Insight Hospital
- Develop Foundation Platform

## Prototype

- Completed In-Silico Pilot with IBM
- Developed Human Digital Twin
- Demo w IBM to Major Pharmas
- Finalize key clients as Beta partners

## Build Platform

- Fully build out **In Silico** Platform
- Fully build out Human **Digital Twin Marketplace**
- Test with Beta partners
- Release Product

## Quantum Extensions

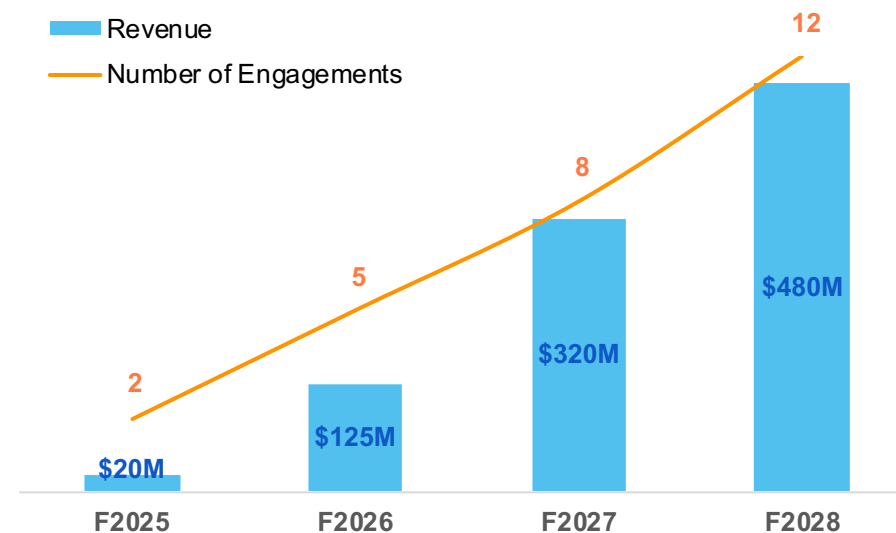
- Develop Pilot using IBM Quantum AI
- Demo at Pharma 2025
- Build out Quantum AI
- Beta test with Key partners
- Release Product

# Pro-Forma Financials

	F2024	F2025	F2026	F2027	F2028
<b>Number of Engagements</b>	-	2	5	8	12
<b>Revenue</b>	-	\$ 20.0M	\$ 125.0M	\$ 320.0M	\$ 480.0M
COGS	-	(6.0M)	(37.5M)	(96.0M)	(144.0M)
<i>Gross Profit</i>	-	14.0M	87.5M	224.0M	336.0M
<b>Gross Margin</b>	-	70%	70%	70%	70%
Operating Expenses	(7.7M)	(5.0M)	(25.0M)	(57.6M)	(72.0M)
<i>EBITDA</i>	(7.7M)	9.0M	62.5M	166.4M	264.0M
<b>EBITDA Margin</b>	-	45%	50%	52%	55%

## GNQ Insilico Inc.

### Revenue & Number of Engagements per Year



### Key Assumptions:

- Anticipated costs for platform development amount to \$7.7M (Y1), which includes \$2.15M for Phase I (Pilot & Showcasing) and \$5.55M for Phase II (MVP & Beta Testing).
- GNQ expects to initiate its first revenue engagement at the start of Q2-F2025.
- The average revenue per engagement in F2025 is projected to be \$10M, increasing to \$25M in F2026 and \$40M in F2027 & F2028.
- COGS is categorized into two segments: (1) Costs paid to IBM (20% of revenue); and (2) Other Direct Costs (10% of revenue).
- Operating expenses are estimated as 20% of revenue in F2025, gradually reducing to 15% by F2028.

# Management Team

**Rehan Huda**

**Board Chair and Chief Executive Officer**

- Has structured numerous public offerings in Canada & the US as investment banking advisor, founder and board member.
- Former senior economist with Canadian federal government and a frequent guest speaker at various international finance and economics conferences.
- Previously CEO of Green Sky Labs, a technology incubation company.

**Sudhir Saxena**

**Chief Technology Officer**

- Big 4 Technology leader (IBM, Accenture) focused on executing technology based go-to-market strategies in healthcare & life sciences.
- Experienced in Exponential technologies (AI, Blockchain and IOT), to leverage health data as an asset and scale human centered AI across all healthcare facets.
- Serial entrepreneur and angel investor, with track record in building & growing technology startups.

**Dr. Jerome Schentag**

**Chief Operation Officer**

- Clinical Pharmacology PK/PD specialist with broad expertise in Anti-infectives, Cardio-metabolic and Immuno-Oncology drug development and regulatory sciences.
- Inventor holding over 90 patents on biologics, drugs medical devices and drug delivery technologies.
- Founder of TheraSyn and Synergy Therapeutics, actively developing solutions for tumor diagnosis and treatments

**Asif Mustafa**

**Chief Financial Officer**

- Over 20 years of experience in finance, risk management, governance, audit, compliance and technology.
- Held senior finance, operations and change management roles in big Pharma, Wall Street and Big 4 Consulting. Has also held management roles in corporate development, M&A and FP&A in Fortune 100 companies.

## Contact

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