AIomiX

Artificial Intelligence Enabled Multi-Granular Integrative Omics

Drug Discovery Platform
The Problem - More Biological Data but Fewer Novel Drugs

The bottleneck is not data generation any longer rather it is the lack of insightful analysis of multi-resolution and multi-omic data.
Solution: AIOmiX: An AI Enabled Multi-Granular Integrative Omics Platform for Drug Discovery

To find critical insights into targets, biomarkers and drugs for a given disease or condition

Integrative Omics using our proprietary AI platform[1]
Market - 10 Billion Dollar Industry By 2030

The total market is expected to grow at 36.1% CAGR from 1 billion in 2022 and 10 billion by 2030[2]

Based on total market size estimates for 2022 and 2030

Revenue Potential By 2030
10% of 2030 Target Market
~$500 million ARR

Target
- Big Pharma & CROs
  - ~$0.5 billion
  - ~$1 million ARR
- 2-3 SAAS contracts*

Served
- US, Europe & China
  - ~$0.8 billion
- 80%
- 50%
- 0.2%

Revenue Potential
- 10% of 2030 Target Market
- ~$500 million ARR

*Typical SaaS contracts in this domain go from anywhere between $100K to $1 million

Market size (in billions)
- 2020: 0.5
- 2021: 1
- 2022: ~$1 billion
- 2023: ~$2 billion
- 2024: ~$3 billion
- 2025: ~$4 billion
- 2026: ~$5 billion
- 2027: ~$6 billion
- 2028: ~$7 billion
- 2029: ~$8 billion
- 2030: ~$10 billion

Total Market Size 2022
- ~$1 billion

Total Market Size 2030
- 10 billion

~$1 million ARR
Competitive Landscape

AI for Multi-Granular
(Whole body, Organular, Tissue & Single-Cell)
Integrative Omics for Drug Discovery

AI for Bulk Integrative Omics
for Drug Discovery

Artificial Intelligence
for Drug Discovery

Data Science
for Drug Discovery

precisionlife
driving precision medicine

IBM

Atomwise

Google

Microsoft

flatiron

gsk

10x GENOMICS

Novartis

Deep Genomics
Differentiators

1. Holistic Drug Discovery
Integrating knowledge from traditional medicine to omics datasets to smarter clinical trials with the goal to discover novel, first-class therapeutics cheaper and faster

2. Multi-Granular Integration
Integrating data all the way from Whole Body down to Single Cells in one platform

3. Proprietary AI Algorithms
Built by experts, tested by drug discovery stalwarts

4. Proprietary Data
Agglomerated data from 1000s of experiments and studies to find novel insights
**Revenue Plan** - Three Pronged Approach

### For profit SaaS contracts with Big Pharma and CROs
- Annual contracts worth $100K-1M
- High security platform with options of local deployment at an extra charge
- Expect doubling of revenue year on year through this source
- Expected to hit ARR of $450M by 2030

### Free offering for academia and start-ups up to 3 analysis per year
- Pay per analysis after first 3 analyses in a year priced at $1000 per analysis
- No local deployment available. Data uploaded will be used for improving tools and building proprietary data lake
- Small source of revenue but huge source for generating buzz and testing as well as improving the platform

### Contracts for using Proprietary Data Lake
- Expected launch by 2024
- Will be offered to pharma and academia at a premium cost to integrate into their current platform or use independently
- Pricing around this is yet to be determined based on value created
Team - 50 years of combined biomedical expertise

Aarthi Venkat
PhD Student
Computational Biology
Comp. Bio. & Software Expert
Experience working at Google Brain

Dennis Shung
MD-PhD
Department of Medicine
Clinical Informatics Expert
Director of Digital Health, Yale School of Medicine

Manik Kuchroo
MD-PhD Student in Neuroscience & Comp. Bio.
Omic Informatics Expert
Past experience working in Big Pharma Omics analysis

Raghav Sehgal
PhD Student
Computational Biology
Product and Business Expert
Led product development at biomedical data science start-up

Smita Krishnaswamy
Associate Professor
Comp. Sci. Department
ML and AI Expert
15 years of exp. building AI tools for biomedical data
Status - Prototyping and Testing

**Drug Discovery**

**Target Discovery**
Discovered CCK as a potential target in pancreatic cancer using single-cell RNAseq.

**Target Validation**
Validated metabolic target as well as regulatory relationships in Triple Negative Breast Cancer

**Biomarker Discovery**
Discovered and built novel epigenetic biomarker for aging in 9 different biological systems

**Drug Repurposing**
Built Drug Metabolism Database to find undiscovered and on and off target effects in 500 drugs for the purpose of drug repurposing

**Precision Medicine**
Discovered T cell types associated with extended recovery for patients hospitalized for COVID-19 infection
What Are We Asking Funding For?

Proof of concept exists, we now want to build a Minimum Viable Product for Academicians to test

Asking $100K to setup Software Dev team

- 1 Senior Software engineer - 1 x $25K
- 3 Junior Software engineers - 3 x $15K
- 1 Designer - 1 x $15K
- Equipment, computing resources and miscellaneous - 15K

We plan on building the product out of South Asia given our Asian connections as well as abundance of economical tech workforce

At this point we wish to test and sell the product through our own network