Democratizing AI in early drug discovery across the industry

Proposal for Phase 1 – Initial impact

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COMPUTING FOR ALL, FOR THE GOOD OF MANKIND

Over the next 5 years, AI will be a commodity across industries - just as cloud computing is pervasive today.

Smaller biotechs are dependent on 3rd party vendors and cannot independently take advantage of the scale and cost-efficiencies that AI brings.

This is frustrating many of us, as it a significant barrier to future innovation and has led to an un-level playing field where the smaller guys don't have a chance.

We have decided to create a non-profit Foundation to develop and deploy useful open-source software to thousands of biotechs – with education and data partnerships.

This will be a Raspberry-Pi moment for early drug discovery!

Why don’t wet lab scientists love AI?

The opportunity is to clear through this inertia

- Tell me what you need, I have an algorithm for that.
- I’ll tell you the answer but cannot relate it to biology.
- Trust me, it’ll be painless.

- I don’t have much data for your modeling.
- Biology is too complex.
- Is your method validated with wet lab data relevant to me?

This is what we have been looking for. It's expensive to adopt AI, and a simple open-source environment will make a big difference to our programme.

- Dr Janette Thomas, CEO, Five Alarm Biosciences

Enabling small to mid-size wet-lab focused biotechs with Data Science skills and environments, so they can independently do faster and more cost-efficient:

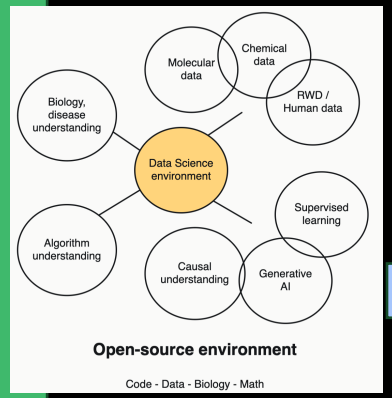
- Molecular pathway exploration
- Target identification
- Drug design
- Toxicity estimation

Providing the tools and capabilities to smaller biotechs, which they would not normally consider because of lack of skills or funds.

The opportunity Phase 1 : 2024 - 2026

Foundation

Dedicated to development, Education, Communication



AI Galaxy Map

HitchhikersAI.org Community

Biotech scientists

CLICK HERE

IMPACT STATEMENT

- Adoption, by at least 20+ biotechs, of AI in early drug discovery by smaller biotechs. With an active community of 100+ biotech companies.
- First annual conference for organizations across the ecosystem

Market Opportunity

McKinsey & Company

There were over 5,500 pharmaceutical companies with active research and development (R&D) pipelines in 2023. The discovery of new medicines and the improvement of existing ones is vital for the continued growth of the industry, and more than 21,000 drugs were in the global R&D pipeline in 2023.

- Statista

About me

- Took IBM Watson Genomics to market, while at IBM Research (NY).
- 15 years experience bringing AI to the drug discovery industry.
- 25 yrs experience evangelizing computational modeling.
- Led standards body, while in the semiconductor industry.
- For more: https://www.raminderpalsingh.com/

Building the team

- A small team of visionary data scientists, biologists, AI ethics experts and mathematicians has stepped up to participate in this mission at launch.
- Additionally, a Biotech User Advisory Group has started to form.

The ASK

- $1M for 2 years of operations from launch (Phase 1)
  - $300k to fund engagement activities and education
  - $700k to fund building of open-source software environment
- Allows initial market impact, and the program design for Phase 2 Scale-up (2026-2028)

The Deliverables

1. Initial framework for *AI Galaxy Map*, published to and reviewed by the user community.
2. Open-source deployable environment optimized for wet lab scientists – providing at-cost services to create frictionless user adoption.
3. Adoption, by at least 20+ biotechs, of AI in early drug discovery by smaller biotechs. With an active community of 100+ biotech companies.
4. Early partnerships with key open-source data providers.
5. First annual conference for organizations across the ecosystem

AI is the great technology of the future. Today it is accessible only to a few biotechs. In the future, it will be available to all. This initiative kickstarts the process.

- Prof Tony Sedgwick, ex-Roche VP