

# Ignota Labs, solving drug safety issues and bringing new hope to patients

*As part of our quick founder questions series – or QFQs – we spoke to Sam Windsor, cofounder and CEO of Ignota Labs about AI drug discovery, clinical trials and salvaging failed drugs.*

Temps de lecture : minute

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I had worked in the healthcare industry for nearly a decade, bringing AI into different organisations to solve problems, including DeepMind's AlphaFold.

However, I felt the focus on innovation was only happening more upstream and not making it into the clinic. AI drug discovery was all focused at the beginning, as the challenge of identifying novel compounds with therapeutic effects in itself is huge. But this is still only step one.

After therapeutic effect is demonstrated, 56% of drugs fail due to safety issues and fail to make it through clinical trials and to patients. This is the bottleneck that Ignota labs is targeting, so that more drugs actually make it to the clinic and get to the patients who need them.

**Tell us about the business - what it is, what it aims to achieve, who you work with, how you**

## reach customers, and so on?

We are a drug turnaround business. We review projects that have been prematurely abandoned and identify those with hidden potential. We buy drugs with safety issues that are fundamentally 80%-90% there. Using our platform, we can work out what really happened with the safety issue and pick those that can be revived. This is a novel way of building a pipeline of drugs with multi-billion-pound potential, and it is faster and cheaper than conventional methods.

Most drugs never make it to market, and this results in extraordinary costs, which burden our healthcare systems around the world. We believe that Ignota Lab's approach can get new drugs to market faster and cheaper - helping the lives of billions of people worldwide.

Because our business model is to buy failing drugs and turn them around, our 'customer base' is multi-sided. On the one hand we have companies whose assets have run into trouble (where we can give them a second chance. On the other hand, we look to sell those assets to other biotechs once we have turned them around (mostly big pharma). Ultimately, we serve patients who are desperately waiting for new treatment options for their conditions.

## How has the business evolved since its launch?

We have iterated Ignota Labs' business model a few times based on feedback from the market. The most obvious change has been to move away from a proactive approach (helping companies predict if their drug will be toxic) to a retroactive turnaround approach. This pivot resulted from a mixture of commercial drivers.

First, we found that early-stage companies and projects were unwilling to

pay for proactive de-risking of safety and were mostly driven by what their funders are asking for. Second, the value of technical differentiation; we are uniquely good at understanding clinical translation, specifying differentiation e.g. mouse vs rat vs human, and deeper biological analysis.

Unfortunately, the commercials for proactive assessment are just not there at the moment - perhaps over time people will realise the value our technology is creating and we will be able to support a wider range of projects on commercially attractive terms.

## Tell us about the working culture at Ignota Labs

We have a small team of highly skilled, interdisciplinary experts, covering drug discovery, ML Ops, bioinformatics, cheminformatics, sales, software development and business strategy. We focus heavily on cross-discipline learning and collaboration.

I have learned so much about technical areas I previously knew little about, and I get to learn from leading researchers and PhDs, as well as experienced practitioners in industry. We also hire heavily for an optimistic view of what is possible, with bias towards having a go and failing quickly over finding problems ahead of time. Generally, we aim for a friendly and supportive culture as we believe a team achieves more this way.

## How are you funded?

We've had a mixture of early-stage institutional funding, angel investment, and Innovate UK grants, along with some client work and competition wins. We are now finalising commitments for our first multi-million investment round, led by a leading Silicon Valley investor.

# What has been your biggest challenge so far and how have you overcome this?

Fundraising in a tough climate, particularly in the UK. We spent nearly a year working with all the relevant UK VCs and a lot of the European VCs, but when we went to the USA we came back with a term sheet within a week and a half. The investment market is night and day on different sides of the Atlantic.

# How does Ignota Labs answer an unmet need?

Drug safety failures account for 56% of all failed compounds, costing the pharmaceutical industry over \$400B. When the failures happen, the understanding of what actually went wrong is poor to non-existent. Clinical trials give outputs such as 'patients experienced chest pains', but there are 1,001 different potential causes of chest pains. Traditional 'investigative toxicology' methods take years and cost millions, often to find out that the safety problem cannot be resolved.

Our platform not only gets to a granular, molecular, and biological cause of the safety problem, but it also answers a very key commercial question: if you give us 1,000 failed drugs, we can find the 10%-20% that are genuinely salvageable and can be turned around. This information arbitrage underpins our business model.

# What's in store for the future?

Growth. We aim to turn around five assets in the next 18 months, which will all be in the clinic within 12-18 months of purchase. Now is a time in which many biotechs are struggling, but that is a great opportunity for us to create value and help both those existing companies, while creating a

phenomenal pipeline of our own.

## What one piece of advice would you give others founders or future founders?

First, don't found a company on your own. We have three founders and it still feels like more work than there are hours in the day. I don't understand how people do it on their own.

Second, although 'founder advice' on things like LinkedIn is generally just the same messages parroted by 'LinkedIn influencers' who have never actually founded a company, the advice itself is often sound. Be careful before thinking you are an exception.

## And finally, a more personal question! What's your daily routine and the rules you're living by at the moment?

Get up and walk our dog - this is a really important time to clear my head and get some gentle exercise. I try to make that time phone-free. The emails will wait an hour and that headspace really sets me up for the day. I also try to swim on days when my wife is doing the dog walk.

Beyond that, it is a mixture of desktop work and face-to-face meetings and each day varies. I do try to take at least 20 minutes away from my desk for meals with my wife though. A sandwich at your desk is rarely productive. I spend a lot of time travelling between Oxford, Cambridge, and London - it really is where a lot of the UK ecosystem is.

Sam Windsor is the cofounder and CEO of biotech firm, *Ignota Labs*.



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