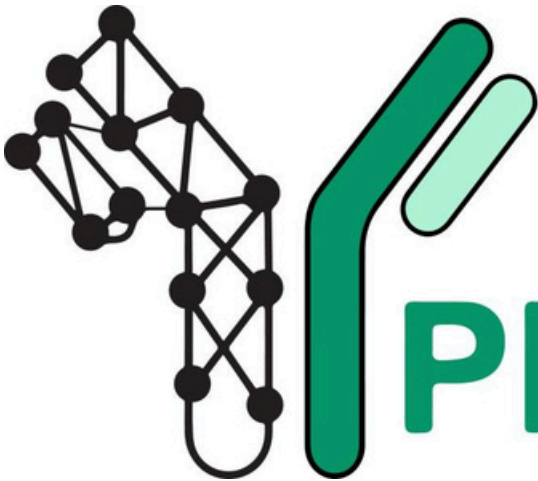




PhytoVenomics



Company Overview

PhytoVenomics is a biotechnology start-up founded in 2025 by University of Edinburgh biology alumni Tristan Farmer and Arvaan Mukherjee. The company is focused on improving treatment for snakebite victims by developing a new generation of antivenoms using machine learning and sustainable biomanufacturing methods. PhytoVenomics aims to create safer, more effective therapies that could significantly improve survival and recovery for people affected by snakebites globally.

Key Challenges Addressed

Venomous snakebites remain a major global health challenge. Many existing treatments rely on decades-old production methods that involve injecting animals with venom and collecting antibodies from their blood. This process has high manufacturing costs, is difficult to scale and can lead to inconsistent supply and variable product quality. PhytoVenomics addresses these challenges by re-engineering how antivenoms are developed and produced. The company uses computational and AI-based tools to design highly specific antibodies capable of targeting venom toxins with greater precision. These antibodies are then produced using microalgae expression systems, offering a more ethical, cost-effective and scalable manufacturing route.

Role of Roslin Innovation Centre

PhytoVenomics joined Roslin Innovation Centre in November 2025, soon after the company was founded, enabling the team to establish its research and development activities within a purpose-built life-sciences environment from the outset.

While PhytoVenomics uses artificial intelligence to design new antivenom treatments, their research and development cannot be carried out on computers alone. Their therapies are produced and tested using biological systems, requiring access to specialist laboratory facilities. Promising antibody candidates identified through AI need to be physically created and validated, including engineering biological organisms to produce therapeutic proteins and testing their effectiveness against venom toxins. The Roslin Innovation Centre laboratories provide the company with dedicated space to refine its methods and work towards scalable, cost-effective production, without the need for independent facilities. Proximity to leading research expertise and a network of innovation support provides the opportunity for collaboration, knowledge exchange, and commercial development.

Beyond infrastructure, Roslin Innovation Centre has played an important role in raising PhytoVenomics' profile and connecting the company to funding opportunities, innovation programmes and strategic networks. These connections have supported early funding, building credibility within the biotech sector, and enabled partnerships that enhance both the company's technical capabilities and innovation reach. These include participation in the NVIDIA Inception Programme, providing access to advanced AI tools and expertise, and the Google for Startups Cloud Programme that supports computational infrastructure for large-scale data analysis and model development.

With continued support from Roslin Innovation Centre's ecosystem, PhytoVenomics is well positioned to scale as a high impact biotech company addressing critical unmet needs at the intersection of AI, sustainability and global health.

