

Vegvisir Technologies

Freeing the burden of injection treatment for therapeutic peptide-based products

THE PROBLEM

Biopharmaceutical molecules, such as therapeutic peptides and antibodies, demonstrate significant potential in addressing illnesses that small molecules have struggled to treat. This potential stems from their size, facilitating specific and extensive surface interactions. However, the majority (~95%) of current biopharmaceutical products necessitate injection administration due to technological limitations. The existing orally delivered products exhibit only single-digit bioavailabilities, emphasizing the need for innovation in this area. Oral drug delivery involves drug absorption through the gastrointestinal (GI) tract and the distribution of the drug in the body. However, challenges arise due to biological barriers in the GI tract. The stomach's acidic and enzyme-rich environment, the enzymatic activity in the intestines, and the epithelial lining of the GI tract pose significant barriers to drug absorption, especially for large molecules like proteins and peptides. A delivery system is therefore required to protect the drug against the harsh environment and ensure efficient transport across the epithelial lining into the blood stream.

OUR SOLUTION

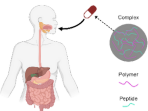
Our innovative polymer-based delivery system addresses the challenges of oral peptide delivery by developing a peptide-polymer complex's that functions as both carriers and permeation enhancers for therapeutic peptides. The platform protects against degradation, while the peptide-containing phase is preferentially drawn to, and assisted in penetrating, the epithelium. Our approach involves a workflow to optimize the polymer composition for each specific therapeutic peptide through in vitro and in vivo evaluations.

TASKS & RESPONSIBILITIES (FIRST 3 MONTHS)

The key tasks include:

- Understanding the technology on a basic level
- At first and later handling fundraising
- Building an investor slide decks (reading and pitching)
- Building relations with biotech, pharmaceutical and venture capital companies

Our goal for the trial period is to identify a co-founder with expertise in business development who can take on the role of CBO or CEO for the spin-out. Ideally, we aim to find a strong match, enabling us to offer a paycheck while said person can addressing the outlined tasks.



CO-FOUNDER PROFILE WE ARE LOOKING FOR

Must-Have Qualifications/Background

Experience within business development for biotech start-up and/or university spinouts. This includes fund raising and QMS. Preferable a person who has "taken the trip" before, from spin-out to exit or IPO.

Nice-to-Have Qualifications/Background

Has a relevant network for the project which may include connections to biotech, pharmaceutical and venture capital companies.

Personal Fit

An outgoing, responsible, and self-driven individual who thrives as a team player and proactively pitches in with new ideas, projects and directions for the project.

PATENT STATUS

Yes, currently drafting patent claims on new data in collaboration with DTU.

TARGET MARKET & CUSTOMERS

Our goal is to serve biotech and pharmaceutical companies specializing in the development of peptide-based medical treatments. Our business model is built around forming partnerships with these companies to develop customized polymers tailored to their peptides, enabling and improving oral delivery solutions.

MILESTONES ARCHIEVED

We have completed two rounds of polymer screening, resulting in the identification of two promising polymer candidates for three different peptides. Our data demonstrates *In vivo* proof of idea and we have executed *in vivo* proof of concept, which is currently under analysis. Based on these findings, we have received positive feedback from Gubra and Zealand Pharma, as well as a letter of intent from Zenion Pharma.

FINANCIAL OVERVIEW

We have acquired the following funding: DTU Discovery grant (150.000 DKK), SPARK Denmark (700.000 DKK) and DTU POC grant (500.000 DKK). As of today, the project is fully funded till the end of June 2025. We have applied for the Innoexplorer grant which will extend the project till the end of June 2026. We intend to apply for additional grants to support additional personal and experiments. These include Novo Nordisk Foundation Pioneer Innovator, Lundbeck Foundation Frontiers grant and EIC Pathfinder Open grant. We have received positive expressions from biotech and pharmaceutical companies which indicate partnership agreements.

PHYSICAL ADDRESS

DTU – Department of Health technology, Produktionstorvet - Building 423
2800 Kongens Lyngby

ACADEMIC & ENTREPRENEURIAL BACKGROUNDS OF CO-FOUNDERS

- **PhD Student Kaia F. Præstegaard:** Master in Medical Chemistry from DTU; PhD student in Anton Autzen's group on developing polymers for medical and analytical applications.
- **Associate Professor Anton A. A. Autzen:** PhD from Aarhus University; combined 4.5 years at UC Berkeley and Stanford University in the labs of Ting Xu and Eric Appel, focusing on polymer chemistry; Anton is the co-founder and CEO of Polyeuctix, part of the Venture Lab program at BII, aiming to secure funding for its next steps. He also has experience in developing and selling polymers to suppliers.
- **Post Doc Philip M. Lund:** Master in Nanoscience from UCPH; PhD from DTU focusing on oral delivery of peptides in the center for intestinal absorption and transport of biopharmaceuticals; Philip has been a part-time business developer at Polyeuctix and has engaged in entrepreneurial courses and networking in Greater Copenhagen.

About Open Entrepreneurship

Open Entrepreneurship is a collaboration between all Danish universities aiming to create more new companies based on research and new technology.
See more at www.open-entrepreneurship.com

