BOKU
Institute of Bioprocess Science and Engineering

Christian Doppler Forschungsgesellschaft

Christian Doppler Laboratory for
Sustainable Manufacturing of Functionalized Biopharmaceutical Peptides

Our CD Laboratory integrates fundamental and applied research to transform biopharmaceutical peptide manufacturing through innovative, sustainable biotechnological processes, making future therapies affordable and accessible to all patients. The focus is on recombinant production of peptides containing non-canonical amino acids using *Escherichia coli* as a cost-effective and scalable alternative to conventional chemical synthesis. Our interdisciplinary work combines molecular biology, expression system engineering, advanced fermentation, and downstream processing.

We offer a

PhD position

in downstream processing to investigate

Model-assisted optimization of the purification of recombinantly produced peptides

Start: 01.07.2026
Employment: 30 hours per week for 3 years (with option for temporary extension)
Salary: ca. 2,800 € per month (14 times per year), including social, health and pension insurance
Workplace: BOKU University, Institute of Bioprocess Science and Engineering, Muthgasse 18, 1190 Vienna, AT

What to expect: You will join an ambitious research team in a well-equipped scientific environment with strong team spirit, vivid discussions, and close collaboration with a leading biotech company. The PhD position is embedded in the Doctoral School *Bioprocess Engineering*, offering training and networking with other doctoral researchers.

YOUR RESEARCH TASKS

The research will focus on developing an integrated semi-continuous ion-exchange purification method for recombinant peptides containing non-canonical amino acids. To achieve this your tasks will be:

- Optimize the extraction of peptides from E. coli cells
- Screen different ion exchange resins for their chromatographic performance
- Develop chromatographic purification methods for several peptide candidates
- Build a modelling framework to describe and optimize the purification process
- Present research results at regular project and collaboration meetings as well as international conferences

REQUIREMENTS

- Master's degree in biotechnology, biochemical engineering or related fields
- Solid knowledge and hands-on experience of state-of-the-art protein purification techniques and/or bioprocess engineering
- Strong interest in protein/peptide separation mechanisms, as well as optimization and modelling of chromatographic separations
- High motivation to reach ambitious goals, learn new techniques and develop cutting-edge methods
- Excellent communication skills for interdisciplinary teamwork; confident presentation of results in oral and written form

HOW TO APPLY

Please send your application (motivation letter, CV, master's degree certificate) to: Dr. Monika Cserjan, Head of CD Laboratory (monika.cserjan@boku.ac.at) and Assoc. Prof. Dr. Rainer Hahn (rainer.hahn@boku.ac.at).