The Department of Biotechnology and Food Science, Institute of Microbiology and Microbial Biotechnology, is currently seeking a

Postgraduate Research Associate

Cellular Cocktails: Artificially creating organelles for improved oxidative protein folding (COE Project PhD 2.3)

assigned to research program *Self-Sustainable Microbial Systems* of **Cluster of Excellence (CoE) Circular Bioengineering** https://www.circularbioengineering.at

(Reference code 201)

Extent of employment: 30 hours per week
Duration of employment: 1st of November 2025, limited to 31st of October 2029
Workplace: BOKU University, 1190 Vienna, Muthgasse 18
Allocation in compliance with the Collective Agreement for University Staff to job group: B1
Gross monthly salary: (depending on previous eligible experience) at least: € 2.786,10 (payable 14 times per year)

About the Position:

Background: Artificial organelles, such as synthetic ER-mimetic environments, have the potential to address current challenges in protein folding, enzyme production, and the sustainable synthesis of key proteins. Design and development of artificial organelles in yeast cells will enable novel solutions for production of recombinant proteins of high societal impact and high demand. Oxidative protein folding is located within the ER of eukaryotic cells. Strikingly, even in single cell eukaryotes such as yeast, several functionally redundant isoforms exist for each step. So far, their distinct functions and substrate specificity has been studied in deletion mutant cells, however, these studies are limited as during the lack of one isoform the cells compensate by the other isoforms.

Research Objectives:

This research aims to advance the understanding of oxidative protein folding mechanisms using synthetic mini-compartments and to develop novel approaches for engineering and production of proteins and enzymes.

1. Creation of a synthetic yet contextualized ER mimetic environment in a cell-free setup

2. Study the individual roles of redundant eukaryotic oxidative protein folding catalysts and their requirements during substrate folding kinetics and transport
3. Design of tailored synthetic ER folding modules in vivo to meet the requirements for the identified best suited folding catalysts

Required skills and qualifications

- Diploma degree in biotechnology, molecular biology, biochemistry (MSc) or other equivalent university degree
- Language skills: very good English skills
- Strong background and practical experience in molecular biology, synthetic biology and/or (microbial) cell engineering, and protein analysis requested
- Strong background and practical experience in in vitro protein synthesis (CFPS) and/or biophysical protein characterization desired
- Scientific interest in protein folding and yeast biotechnology desired

Applications can be submitted until: 27th of October 2025

University of Natural Resources and Life Sciences Vienna seeks to increase the number of its female faculty and staff members. Therefore qualified women are strongly encouraged to apply. In case of equal qualification, female candidates will be given preference unless reasons specific to an individual male candidate tilt the balance in his favour.

People with disabilities and appropriate qualifications are specifically encouraged to apply.

Please send your job application to Personnel Management, University of Natural Resources and Life Sciences, Peter-Jordan-Straße 70, 1190 Vienna; E-Mail: recruiting@boku.ac.at. **(Reference code: 201)**

- Please use this **Application form – PhD-positions**
- Please note that we will not be able to process your application without this form and unless it is sent to recruiting@boku.ac.at
- Following additional documents have to be submitted as .pdf files:
  - Curriculum vitae
  - Copy of certificates from the applicant's bachelor and master/diploma studies
  - A translation of the documents is necessary if the original documents are not in English or German

For information on the further application procedure – online hearing and interviews – see https://www.circularbioengineering.at/jobs

We regret that we cannot reimburse applicants travel and lodging expenses incurred as part of the selection and hiring process.

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