

Research Assistant/Doctoral Candidate (m/f/d)

in the subject area of

Biocatalytic Vitamin B6 production

The research project and environment

The project aims to implement and improve an enzyme cascade for the production of vitamin B6 (pyridoxal-5-phosphate) from xylose. Preliminary work demonstrated the possibility to replace the natural 12-step pathway by a six-step reaction route, based on which a robust, scalable bioprocess should be established. Here, the focus lies in the development of an optimized immobilization protocol for each pathway enzyme. This includes the engineering of pathway enzymes for immobilization, testing and selection of the best enzyme variant and structure- and function-guided development of an optimized immobilization protocol aiming for high activity, stability, and reusability.

The Department of Chemistry of Biogenic Resources at the Technical University of Munich's Straubing Campus for Biotechnology and Sustainability has been active in this field for more than a decade.

The project itself forms part of the national bioeconomy strategy "Bioeconomy International 2025" and is complemented by work from the collaboration partners from the group for Bioverfahrenstechnik (TUM) and the Brazilian Center for Research in Energy and Materials (CNPEM).

Requirements

- Excellent degree in biotechnology, biochemistry, chemistry or related disciplines.
- Knowledge of Biocatalysis, Protein Chemistry and Bioanalytics.
- Curiosity and interest in scientific issues.
- High level of commitment as well as teamwork and communication skills.

We offer

- As a TUM doctoral student, you are automatically a member of the TUM Graduate School and benefit from an extensive qualification and continuing education program, funding for international travel, and target group-specific services and consulting.
- Remuneration is in accordance with TV-L, level 13 (65%), and the appointment is limited to three years.
- Severely disabled applicants will be given preference in the event of otherwise essentially equal suitability.
- The Technical University of Munich aims to increase the proportion of women; applications from women are therefore expressly welcomed.

Application

Please send your detailed application by e-mail (keyword VitB6) to

Technical University of Munich

Chair of Chemistry of Biogenic Resources, Prof. Dr. Volker Sieber
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