



Position for Master`s Thesis

The Fraunhofer-Gesellschaft (www.fraunhofer.com) currently operates 76 institutes and research institutions throughout Germany and is the world's leading applied research organization. Around 30 000 employees work with an annual research budget of 2.9 billion euros.

At Fraunhofer IZI-BB, our multidisciplinary team advances protein synthesis using eukaryotic cell-free expression systems derived from CHO, Sf21 (insect), and K562 (human) cell lysates. These systems let us produce complex proteins rapidly and flexibly - without the constraints of living cells.

This thesis focuses on Phase II liver enzymes that conjugate xenobiotics and drugs to enhance solubility and excretion. You'll help establish and compare cell-free production pipelines and functional assays for key enzymes.

What you will do

- Expression of selected Phase II enzymes in different eukaryotic cell-free systems
- Characterization of synthesized proteins via Western Blot
- Implement and optimize photometric and fluorometric activity assays for enzyme characterization
- Screen drug transformations using the cell-free synthesized catalysts and analyze reaction products
- Document results and present findings to the project team

What you bring to the table

- Basic knowledge of protein biochemistry and molecular biology (e.g., cloning, SDS-PAGE, Western blot, basic enzymology)
- Strong interest in hands-on lab work and enzyme characterization
- Motivation, attention to detail, and a willingness to learn
- (Nice to have) Experience with protein expression, HPLC, and/or handling membrane-associated enzymes
- Very good English communication skills (written and spoken)

What you can expect

- A young, dynamic, and supportive research environment
- A challenging thesis topic embedded in an exciting, application-oriented project
- Close supervision/mentoring, access to state-of-the-art labs, and opportunities to publish/present

We value and promote the diversity of our employees' skills and therefore welcome all applications - regardless of age, gender, nationality, ethnic and social origin, religion, ideology, disability, sexual orientation and identity. Severely disabled persons are given preference in the event of equal suitability.

Interested? We look forward to getting to know you! Please send a short motivation and your CV as PDF and preferred start date to the contact below.

Earliest start date: 01 October 2025

Your contact person for questions to this position:

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