



## Research Intern – Characterization of implantable biosensing probe coating materials (Group Biomarker Detection in Brain)

### About BioMed X

BioMed X is an independent research institute located on the campus of the University of Heidelberg, Germany, with a world-wide network of partner locations. Together with our partners, we identify big biomedical research challenges and provide creative solutions by combining global crowdsourcing with local incubation of the world's brightest early-career research talents. Each of the highly diverse research teams at BioMed X has access to state-of-the-art research infrastructure and is continuously guided by experienced mentors from academia and industry. At BioMed X, we combine the best of two worlds - academia and industry - and enable breakthrough innovation by making biomedical research more efficient, more agile, and more fun.

### About Team BDB

The objective of the group 'Advanced Biomarker Detection for Pharmacological Monitoring in the Brain' (BDB), headed by Dr. Khulan Sergelen is to develop an *in vivo* continuous monitoring biosensor for direct detection of small molecule biomarkers in brain tissue of rodent models for elucidating pharmacodynamic (PD) effect and pharmacokinetic (PK) parameters of drugs against neuropsychiatric diseases. Our team will explore the multifaceted task of continuous monitoring biosensor development, including molecular design and assay development, biocompatible sensor architecture, and optical sensor integration for *in vivo* monitoring.

### The Position

We are seeking a highly motivated master's student to join our research team for a part-time position (20 hours/week) for a duration of 6-12 months starting from January 2025. The project focuses on the characterization of coating materials for implantable biosensing probes.

Responsibilities:

- Conduct research on the characterization of implantable biosensing probe coating materials
- Perform soft material characterization experiments using techniques such as surface plasmon resonance (SPR) and fluorescence microscopy
- Analyze and interpret experimental data
- Contribute to the preparation of research reports and presentations

Qualifications:

- Current enrollment in a master's program in Biotechnology, Materials Science & Engineering, or a closely related field
- Strong background in materials science and a keen interest in biosensors
- Experience with soft materials characterization techniques is highly desirable

Additionally, the students will have the opportunity to work with our state-of-the-art multiparametric surface plasmon resonance (MP-SPR) instrument to further investigate the functionality of the sensor coatings, depending on their interest and project requirements. This position offers an excellent opportunity for a master's student to gain hands-on research experience in an interdisciplinary environment while contributing to the advancement of implantable biosensing technologies.

## **How to Apply**

If you are interested in the position, please submit your application by e-mail before 13th December, 2024 to the attention of Dr. Soohyun Park ([park@bio.mx](mailto:park@bio.mx)). Applicants will be interviewed upon incoming documents, hence please get in touch as soon as you decide to apply.

## **Contact**

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