



Master's thesis position (all genders) in Materials Science – Group Biomarker Detection in Brain (BDB)

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, 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 looking for a master's student (20 h /week, duration: minimum 6 months) to carry out thesis research in our team on the topic of "Reaction-diffusion model to define spatiotemporal dynamics of responsive hydrogels". The ideal candidate would be a student of Physics with strong mathematical skills and experience with theoretical simulations such as Finite Element and Reaction-diffusion models using COMSOL, python, MATLAB, ABAQUS or FDTD.

How to Apply

If you are interested in the position, please submit your application by e-mail before April 15, 2023 to the attention of Dr. Khulan Sergelen (sergelen@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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