

# Interested in how mechanics impact on human neural stem cell lineage decisions?

PhD position available in the **FALK**<sup>LAB</sup> ([www.falklab.info](http://www.falklab.info)) and the **KAROW**<sup>LAB</sup> ([www.karowlab.org](http://www.karowlab.org)) at the **Institute of Biochemistry** of the FAU Erlangen-Nürnberg.

We are thrilled by the question how mechanics impact on human brain development. Using **human brain organoids** we want to elucidate how mechanical forces instruct neural stem cell lineage decisions and aim at identifying the molecular framework essential for relaying changes in the physical environment to alterations in cellular behavior. This project is embedded in the newly established and highly interdisciplinary CRC1540 'Exploring Brain Mechanics' (EBM; <https://www.crc1540-ebm.research.fau.eu>). The integrated EBM graduate school offers a structured curriculum and a wide range of scientific and soft-skill training opportunities.

The logo for the Exploring Brain Mechanics (EBM) graduate school, featuring the letters 'EBM' in white on a blue, cloud-like background.

EBM

The multifaceted project involves state-of-the-art techniques such as application of bioengineered synthetic scaffolds during brain organoid development, single cell RNA-sequencing as well as continuous live imaging to dissect the molecular and cellular changes upon acute and long-lasting changes in the mechanical environment of organoid-resident neural stem cells

We are looking for a curious and knowledge-driven student with a diploma/master's degree in biology, Molecular Medicine, or related fields. Candidates should have a strong background in neurobiology, bioinformatics, and developmental biology.

## Want to know more?

Please contact us and send a letter of motivation, CV including publications, names of references, transcripts of records, and a short summary of research experience and master project to:

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