Postdoctoral Researcher to develop highly innovative technology for magnetic stimulation of specific cells and synapses (f/m/x). The research will be done in the frame of EU consortium SynMech (https://www.synmech.eu/) at DZNE Magdeburg (https://www.dzne.de/en/). The position is available for 3.5-year fixed-term period with a salary of TVÖD Bund E13 starting at the beginning of 2024, with a possibility for extension and upgrade to the head of two-photon imaging facility.

The project

The research will be using optogenetics to induce epilepsy, two-photon Ca2+ imaging and electrophysiology to monitor neuronal activity and targeted magnetogenetic stimulation of malfunctioning neural circuits to prevent epileptogenesis or promote healing. The study will be done in the Research Group "Molecular Neuroplasticity" at the DZNE Magdeburg. For examples of our recent studies, please see:
Blondiaux et al., *Neurobiology of Disease, 2023* (https://pubmed.ncbi.nlm.nih.gov/37838005/)
Broekaart et al., *J. Clinical Investigations, 2021* (https://pubmed.ncbi.nlm.nih.gov/33141761/)
Sun et al., *Nature Communications,* 2021 (https://pubmed.ncbi.nlm.nih.gov/34663792/);
Suzuki et al., *Science,* 2020 (https://pubmed.ncbi.nlm.nih.gov/32855309/).

Your profile

- Experience in two-photon imaging in awake rodents documented by publications in high-level scientific journals is a prerequisite for consideration of application.
- Experience in electrophysiology, optogenetics, and preparation of animal experimentation requests in Germany (TVA) will be of advantage.
- Programming skills are desirable.
- Enthusiastic, creative team player, with a strong commitment to research.

The German Center for Neurodegenerative Diseases (DZNE) is a world-leading internationally oriented research center, committed to discovering new approaches to prevent and treat neurodegenerative diseases. To this end, researchers at ten DZNE sites across Germany (www.dzne.de) pursue a translational and interdisciplinary strategy comprising five interconnected areas: fundamental research, clinical research, health care research, population health science, and systems medicine.

We offer

- Full support in grant applications and development of independent lines of research
- Working in an interdisciplinary environment and an international team (https://www.dzne.de/dityatev)
- Opportunity to perform cutting-edge neuroscience and contribute to patenting and developing new treatments for dementia patients
- Excellent infrastructure, including modern workspaces and very well-equipped labs.
- Employment, payment, and social benefits are consistent with those at other leading research institutes
- Dynamic and multicultural environment for neural circuits and cognitive research in the frame of SFB 1436 (sfb1436.de), RTG 1413 (www.synage.de) and CBBS (www.cbbs.eu/en/).

Your employment, salary and employee benefits comply with the collective pay agreement (TVÖD Bund). Equal opportunities as well as compatibility of family and work are part of our HR policy. Severely disabled applicants with equivalent occupational aptitude will be considered preferentially. Please submit your application as soon as possible including a detailed CV with a list of publications, names of two referees and brief statements of motivation and research interests via e-mail to: alexander.dityatev@dzne.de. Applications will be considered immediately until the position is filled.