

January 23, 2024

## PhD position in Neurophysiology / Glial physiology at Charité - Universitätsmedizin Berlin

The **Institute of Neurophysiology**, laboratory of **Prof. Dr. Christian Madry**, ([https://neurophysiologie.charite.de/forschung/microglia\\_physiology\\_in\\_health\\_and\\_disease/](https://neurophysiologie.charite.de/forschung/microglia_physiology_in_health_and_disease/)) at the Charité Berlin offers a PhD position in a collaborative project with the group of PD Dr. Jonas Sauer at Freiburg University to investigate the **role of microglia in regulating neural circuit function**. This position is embedded within the newly established Collaborative Research Centre / Transregio 384 "*Inhibitory Neurons: Shaping the cortical code*" (<https://www.med.uni-freiburg.de/de/fakultaet/der-dekan-gratuliert/SFB%20Bartos>).

Scientific background: Microglia as the brain's innate immune cells are increasingly recognized as key players involved in shaping neural function in the developing and adult central nervous system (CNS). By dynamically interacting with neurons and other CNS cells, microglia constantly monitor the functional state of neurons and promptly respond to disturbances in brain homeostasis or injury. Due to their ability to sense changes in neuronal activity, microglia can rapidly establish functional interactions with neural structures that lead to changes in synaptic transmission, excitability and plasticity of neurons. These interactions on the cellular level affect neural network function and behavior. **This project aims to explore the interactions between microglia and GABAergic interneurons in coordinating neuronal network activity in the hippocampus in mice.**

**We invite applications from highly motivated candidates who demonstrate a strong interest in neurobiology**, which is underpinned by a high-level university degree in Life Sciences (master of science or equivalent degree in biology, neuroscience or a related subject). Experience or background in electrophysiology and imaging techniques is desirable (but no prerequisite), as well as basic programming skills and very good language skills in written and spoken English.

We offer an attractive working place in a highly motivated interdisciplinary team starting in April 2024. Our laboratory is based in the Institute of Neurophysiology at the central campus of the Charité in the heart of Berlin. As one of Germany's most research-intensive medical schools, the Charité provides an excellent, highly interactive scientific environment bridging basic science and clinical research.

**The PhD is funded as part of the SFB/TRR 384 for 4 years.**

Please submit your application including CV stating your education and university degrees, a brief statement why you are interested in this position, and contact details of two academic referees **until February 20, 2024** in a single pdf file to christian.madry@charite.de.