

PhD Position in Neurobiology - ERC Project on Wireless Neural Control

Naturwissenschaftliche Fakultät, Erlangen, Full time, Temporary employment, Bewerbungsschluss: 19.04.2026

Your Workplace

The Biointerfaces Lab at Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU) is seeking a highly motivated PhD candidate with a strong background in neurobiology or neuroscience to join an ERC-funded research project focused on wireless control and recording of neural signalling using magnetic nanomaterials.

Our research develops magnetic nanointerfaces that convert external magnetic fields into mechanical or electrical stimuli, enabling wireless modulation of cellular signalling and neuronal activity. The project investigates signalling mechanisms in the central nervous system and explores new strategies for minimally invasive neuromodulation and neural recording.

The work lies at the intersection of neurobiology, neurophysiology, biomaterials, and neurotechnology, within a highly interdisciplinary team combining expertise in nanomaterials, neurobiology, and neural interfaces.

Job Benefits

- Regular promotion to the next level and increase in salary pursuant to the collective bargaining agreement for the public service of the German Länder (TV-L) or remuneration pursuant to the Bavarian Public Servants Remuneration Act (BayBesG) plus an additional annual bonus
- 30 days annual leave at five working days per week with additional free days on December 24 and 31
- Occupational pension scheme and asset accumulation savings scheme

Description

Your tasks

- Establish and maintain primary neural culture and slice systems and related neurobiological models
- Perform immunofluorescence staining and advanced fluorescence microscopy
- Investigate neuronal and astrocytic signalling in CNS systems
- Study wireless modulation of neural activity using magnetic nanomaterials through calcium imaging and MRI dynamics
- Contribute to functional assays and neural recording experiments
- Collaborate closely with researchers in materials science and bioengineering

Qualifications

Required qualifications

- Masters degree in neuroscience, neurobiology, biomedicine, or a related field
- Experience with cell culture, ideally primary neuronal cultures and acute/organotypic slices
- Experience with immunofluorescence and fluorescence imaging
- A good understanding of neurophysiology and neuronal signalling

Desired experience

- Calcium imaging
- Patch-clamp electrophysiology
- Multi-electrode array (MEA) recordings
- Work with CNS or PNS experimental models

Supplementary description

Application

Applicants should apply with a ++single++ pdf file containing:

- CV
- Motivation letter
- A short outline of research interests within the PhD position
- Contact details of three referees, who may be contacted directly by the appointment committee.

Interessiert?

Die vollständige Stellenausschreibung sowie alle Infos zum Bewerbungsverfahren finden Sie hier:

