Postdoctoral Researcher in Small-Animal MRI and Cross-Species Neuroimaging (f/m/d)

Technical University of Munich (TUM), TUM University Hospital

Max Planck Institute for Biological Intelligence (MPI-BI), Martinsried & Seewiesen

The Technical University of Munich, TUM University Hospital and the Max Planck Institute for Biological Intelligence (MPI-BI) is seeking a highly motivated **Postdoctoral Researcher** with expertise in **magnetic resonance imaging (MRI)**, **biological/physiological sciences**, and a strong interest in **experimental work with small animals**. The position is part of the interdisciplinary project *WildBrain*, which investigates how environmental transitions shape neural plasticity and behavioural individuality across mice and humans.

The successful candidate will join a collaborative team spanning MPI-BI (Martinsried/Seewiesen), the Max Planck Institute for Human Development (Berlin), and Technische Universität Dresden, and will work closely with experts in neuroimaging, behavioural neuroscience, and cross-species data integration.

Your Responsibilities

You will be the lead scientist for small-animal MRI within the WildBrain project. Your key tasks include:

- **Leading the acquisition, optimisation, and analysis of high-field small-animal MRI data** (structural MRI, diffusion imaging, spectroscopy) across experimental cohorts.
- **Developing, maintaining, and harmonising MRI acquisition protocols across species**, ensuring comparability between rodent and human imaging pipelines.
- **Contributing to cross-species methodological integration**, linking rodent MRI, behavioural readouts, and cellular plasticity markers with human MRI data.
- **Working closely with behavioural and neurobiology teams**, particularly those conducting two-photon imaging, neurogenesis assays, and longitudinal tracking in semi-naturalistic and naturalistic mouse environments.
- **Supporting the design and execution of animal experiments** in confined, semi-naturalistic, and open-environment settings (Mouse City and Seewiesen).
- **Co-supervising students and assisting in maintaining data quality, documentation, and reproducibility** across sites.

Your Profile

We are looking for an excellent and collaborative scientist with:

- A **PhD in neuroscience, biomedical engineering, physics, biology**, or a related discipline.
- **Strong practical experience in MRI**, ideally including small-animal or high-field MRI.
- Familiarity with **biological experimentation**, neuroanatomy, or in vivo methods.
- Demonstrated interest in **animal research**, particularly rodent models (experience with mouse handling or physiology is an advantage).
- Experience with **MRI data processing**, image reconstruction, pipeline development, or quantitative MRI (e.g., Python, MATLAB, FSL, ANTs, MRtrix).
- Strong motivation to work in an **interdisciplinary, cross-species framework**.
- Excellent communication skills and the ability to work within an international research team.

We Offer

- A **fully funded 3 year postdoctoral position** (TVL E13) within an innovative, high-impact research program supported by the Max Planck Society and TUM.
- Access to advanced imaging infrastructure, including **7T small-animal MRI**, **two-photon microscopy**, and naturalistic behavioural facilities.
- A highly collaborative environment involving **MPI-BI**, **MPI for Human Development**, **TUM**, and **international partners**.
- A unique opportunity to help establish **cross-species imaging standards** and to contribute to cutting-edge research on neural plasticity under ecologically meaningful conditions.
- Support for professional development, conference travel, and career advancement.

Application

Please submit the following documents as a single PDF to Prof. Dr. Franz Schilling (schilling@tum.de):

- Cover letter describing your research background and motivation
- Curriculum vitae including publication list
- Contact information for two referees
- Relevant certificates and transcripts

Applications will be reviewed on a rolling basis until the position is filled.