UNIKLINIK KÖLN | Klinik und Poliklinik für Neurologie

DFG Deutsche Forschungsgemeinschaft

PhD position / doctoral student (f/m/d) in mouse MR neuroimaging in the newly founded CRC 1451 "Key mechanisms of motor control in health and disease".

Labs of **Prof. Michael Schroeter**, **Prof. Adele Rüger**, and **Dr. Markus Aswendt** at the **Dept. of Neurology, University Hospital Cologne**, are looking for a doctoral candidate to join our team as part of the newly established Collaborative Research Centre 1451 "Key mechanisms of motor control in health and disease".
The project is about **DTI** and **rs-fMRI** in mice, which receive transcranial direct current stimulation as a novel stroke treatment. We will characterize the spontaneous as well as treatment-specific functional and structural connectivity changes at the whole brain level and relate them to sensorimotor tests and histology.

Your tasks:

- Perform mouse brain MRI (Bruker 9.4T), computer-assisted image analysis with the laboratory's own data pipeline AIDA (https://github.com/aswendtlab) and advanced brain network analysis, e.g. using graph theory and machine learning

Your profile:

- M.Sc./equivalent in Physics, Biology, Biomedical engineering, Neuroscience, Life Sciences, or related
- Knowledge & experience in biomedical imaging (MRI, PET or CT) acquisition and/or post-processing
- Basic programming skills (preferably MATLAB or Python)
- Proof of expertise in animal handling and anaesthesia is an advantage (e.g. Felasa B certificate)
- Very good written and oral communication skills in English

Your employment, salary and employee benefits comply with the collective pay agreement (German TV-L). We are looking forward to your electronic application in German or English: markus.aswendt@uk-koeln.de.