

Open PhD student position for combined dynamic PET/MRI offered by the Department of Nuclear Medicine at the University Hospital Münster and the European Institute for Molecular Imaging (EIMI) at the Westfälische Wilhelms-Universität **Münster**, Germany.

**PhD student position (65% E13)  
Pharmacokinetic modelling in dynamic PET/MRI  
(physics, imaging, informatics)  
for the period January 2021 – December 2024**

In the newly established **Collaborative Research Centre 1450 “inSight - Multiscale imaging of organ-specific inflammation”** we are looking for a candidate to work on preclinical and clinical combined positron emission tomography/magnetic resonance imaging (PET/MRI), elaborating synergistic links between both modalities by pharmacokinetic modelling. We want to integrate MRI-derived quantitative information on tissue perfusion and permeability into PET models of radiotracer kinetics in different organ systems and diseases. This way we aim to more accurately quantify imaging biomarkers that reflect clinically relevant molecular features of inflammation- and cancer-related processes.

Applicants are expected to have completed a MSc in physics, engineering, computational science, or biomedical imaging. High motivation and interest in small animal and human imaging using PET and MRI as well as in data analysis are mandatory. Experience in medical imaging and programming skills are a plus.

The successful candidate will be devoted to science as part of an interdisciplinary group that connects small animal imaging with clinical scanning for translation of novel imaging techniques. A direct collaboration with and shared supervision of the candidate by the Experimental Magnetic Resonance Group (Prof. Dr. Cornelius Faber) is provided, offering direct access to an established dedicated MRI infrastructure. As part of the Collaborative Research Centre the project is integrated into a dynamic interdisciplinary team of physicians, physicists, chemists, mathematicians, and computer scientists.

Available instrumentation:

A combined clinical 3T PET/MRI system is available, and a combined preclinical 7T PET/MRI is expected to be installed in 2021. Preclinical 9.4T MRI and different dedicated small animal PET scanners are available. Additionally, access to a GMP-conform PET centre with cyclotron unit, mouse facility, microbiology and biochemical lab, and computer infrastructure for data analysis and modelling are available.

Applications and further information:

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