



The Klinikum rechts der Isar university hospital of the Technical University of Munich is a major European center of medical care and education and teaching with 1.161 beds and around 6,000 employees. Every year around 65,000 patients benefit from inpatient and around 265.000 patients from outpatient care. The hospital is a supra-maximal care home that covers the entire spectrum of modern medicine. Since 2003, the Klinikum rechts der Isar is an institute of public law of the Free State of Bavaria.

The **Department of Nuclear Medicine at the Technical University of Munich (TUM)** is seeking applications from highly motivated candidates for a PhD position in hyperpolarized ^{13}C magnetic resonance imaging. The PhD position is embedded within the Emmy Noether Junior Research Group “Combined biochemical and biophysical imaging biomarkers for characterization of tumor metabolism and response to therapy” led by Prof. Dr. Franz Schilling (<https://www.professoren.tum.de/en/schilling-franz>) and part of the DFG-funded Collaborative Research Center (SFB 824, www.sfb824.de) entitled “Imaging for Selection, Monitoring and Individualization of Cancer Therapies”. The imaging infrastructure located at the Department of Nuclear Medicine (www.nuk.mri.tum.de) and the Center for Translational Cancer Research (TranslaTUM, www.translatum.tum.de) provides state-of-the-art imaging instrumentation and consists of a group of scientists working on applications and specific improvements of multimodal imaging.

PhD position in Hyperpolarized ^{13}C MRI (f/m/d)

Your duties:

- Develop previously unexplored methods using hyperpolarized molecules that provide novel metabolic information currently not accessible with existing techniques
- Establish imaging biomarkers in a preclinical setting based on magnetic resonance imaging and positron emission tomography to enable a comprehensive characterization of tissue providing functional, physiological, metabolic, cellular and molecular information beyond anatomical structures
- Lay out imaging strategies for early-stage detection, tumor phenotyping and evaluation of response to therapy

Your profile:

- M.Sc. or equivalent degree in physics, chemistry, bioengineering, electrical engineering or other related subjects
- Previous experience in biomedical imaging is beneficial
- Team spirit, capability of independent self-motivated work
- Very good English and communication skills are a prerequisite
- Experience in basic chemistry, good computer skills and proficiency in at least one programming language (e.g. MATLAB) are required

We offer:

- Well-equipped, state-of-the-art research environment within the Klinikum rechts der Isar

- Workspace in the middle of Munich with excellent research network and excellent public transport connections (option for 'Job-Tickets' from MVV, Deutsche Bahn, Meridian and BOB)
- Membership in TUM Graduate School (mandatory)
- You will join the TUM Graduate School, which offers excellent opportunities for career development, continued education, and life-long learning
- Situated next to the Alps, Munich is consistently ranked as one of the most enjoyable cities in the world
- The doctoral candidate will be employed by TUM (75 % TV-L E13) for a total duration of three years. The successful applicant will be enrolled within the TUM Graduate School receiving a structured doctoral training (<https://www.gs.tum.de/en/doctorate-at-tum/>)

As an equal opportunity and affirmative action employer, TUM explicitly encourages applications from women as well as from all others who would bring additional diversity dimensions to the university's research and teaching strategies. Preference will be given to disabled candidates with essentially the same qualifications.

We are looking forward receiving your application.

Applications should include a curriculum vitae, certificates and transcripts of academic degrees, a letter of motivation detailing the applicant's research interests, and contact information for at least 2 references. The position can be filled starting earliest in October 2020. Please send your application within one PDF-document no later than October 30th, 2020 to

Prof. Dr. Franz Schilling

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