

Hospital rechts der Isar (MRI) of Munich Technical University (TUM)



37 specializations



founded 1834



6600 employees



160 professions



In the heart of Munich

PhD position (m/f/d)

Metabolic phenotyping of cancer using hyperpolarized ¹³C MRI

Full-time | Temporary contract, up to 4 years | Department of Diagnostic and Interventional Radiology

The Department of Diagnostic and Interventional Radiology at the Technical University of Munich (TUM) is seeking applications from highly motivated candidates for a PhD student working on metabolic phenotyping of cancer using hyperpolarized ¹³C magnetic resonance imaging (MRI). The PhD position is embedded in [Translational Oncologic Imaging group](#) led by Dr. Irina Heid and Prof. Dr. Rickmer Braren and is a part of multicenter consortium funded by German Federal Ministry of Education and Research (BMBF) entitled "Revolutionizing cancer imaging through quantum technologies" ([QuE-MRT](#)). The unique combination of state-of-the-art imaging instrumentation and infrastructure located at Hospital rechts der Isar and the Center for Translational Cancer Research (TranslaTUM) as well as highly collaborative, interdisciplinary work environment of internationally renowned basic and clinician scientists provides outstanding scientific training and research opportunities for graduates of life sciences with interest in translational oncologic imaging.

Your responsibilities:

- Generation and characterization of preclinical mouse- and patient-derived *in vivo* models of renal and pancreatic cancer
- Animal experimental work, biomedical magnetic resonance imaging (MRI) with hyperpolarized ¹³C-substances
- Integrated computational analysis of multimodal imaging data and corresponding histological samples
- *In vitro* and *in vivo* analysis of tumor cells and tissue samples, isotopic labeling and flux analysis
- Preparation and presentation of abstracts, manuscripts, lectures, posters
- Participation at internal and external symposia
- Project-related supervision of Master students and medical doctoral candidates

Your profile:

- M.Sc. or equivalent degree in Biochemistry, Chemistry, Biology, Medical Sciences or other related subjects
- Previous experience in biomedical imaging and/or animal experimental work is beneficial
- High interest in working with preclinical animal and patient-derived *in vivo* models
- Team spirit, willingness to work in a highly interdisciplinary environment
- High self-motivation, independent work style, strong organizational skills
- Candidates should be fluent in spoken and written English

We offer you:

- Highly interdisciplinary, well-equipped, state-of-the-art research environment within the Klinikum rechts der Isar
- Outstanding research opportunities for graduates of life sciences with interest in basic and translational cancer research
- Comprehensive scientific training provided by experienced and qualified colleagues
- Wide-ranging training for animal experimental work techniques certified by Government of Upper Bavaria
- Membership in [TUM Graduate School](#) (mandatory)
- Excellent opportunities for career development, continued education, and life-long learning offered by the TUM Graduate School
- An opportunity to work in the city center of Munich on Max-Weber-Platz with good access to public transport systems and benefits in the form of specially discounted public transport tickets (Job ticket)
- 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 Klinikum rechts der Isar (65 % TV-L E13) for a total duration of three years.

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.

Interview-related costs can, unfortunately, not be reimbursed.

We look forward to your application!

Please submit your complete application as one pdf document by e-mail including

- **a letter of motivation detailing your research interests**
- **a curriculum vitae**
- **certificates and transcripts of academic degrees**
- **contact information for at least 2 references**

The position can be filled starting earliest in October 2022. Please send your application until November 30th, 2022 to

Dr. rer. nat. Irina Heid

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