PhD student in multimodal preclinical imaging/sensing of cardio-metabolic diseases (f/m/d)

We now seek a highly qualified and motivated PhD student (f/m/d) to apply novel optoacoustic sensing platforms in a pre-clinical animal model for cardio-metabolic diseases.

The Chair of Biological Imaging (**CBI**) at the Technical University of Munich (**TUM**) and the Institute of Biological and Medical Imaging (IBMI) at Helmholtz Munich are an integrated, multi-disciplinary research unit, which provide bioengineering solutions to urgent societal needs. CBI scientists develop next-generation imaging and sensing methods to measure previously inaccessible properties of living systems, hence, catalyzing breakthroughs in biology, medicine, and the environment. Comprising 11 inter-disciplinary laboratories and scientists from more than 25 countries, CBI offers state-of-the-art infrastructure for innovative research and an ideal environment to accelerate your career.

The Mission:

Early diagnosis of disease is a key factor to improve treatment outcome, prevent long-term damage and reduce healthcare costs. The successful candidate will apply our novel optoacoustic sensing platforms for early detection of cardio-metabolic diseases, being part of our highly impactful research programs funded by European and national grants. In this PhD project we want to investigate how optoacoustic sensing can be used to diagnosis and monitor cardio-metabolic diseases using *in vivo* imaging/sensing, tissue clearing, and 3D microscopy. Due to the wide range of interdisciplinary working groups in the field of medical and biological imaging at our institute, you will have the opportunity to explore a variety of other imaging techniques from microscopy to PET or MRI imaging.

Your profile:

We are looking for enthusiastic and highly motivated candidates, eager to answer applied biomedical questions and develop their skills in a multidisciplinary environment, using state-of-the-art imaging techniques. The successful applicant must have the following:

- Master's degree in natural sciences, biology, physics, optics, medical technology, biomedical computing, or a related discipline.
- Excellent academic study record.
- Strong motivation, scientific curiosity, and commitment to scientific excellence.
- Team player skills and enthusiasm to work in a multi-disciplinary, collaborative environment.
- Excellent command of the English language.

The applicant should ideally have following qualifications:

• Experience with preclinical animal models and experimental biological work.
• A FELASA certificate and experience in microscopy, optics, sensors, lasers, optical fibers are considered a plus, but not mandatory.
• Programming skills in MATLAB / Python.

The successful candidate will be fully integrated in a lively and interactive working atmosphere within a well-connected network of PhD students and scientists at TUM and Helmholtz.

Our offer:

We offer you the unique chance to make a difference in future healthcare. At CBI, we strongly believe in scientific excellence and innovation. This is your opportunity to be part of and to advance your career in a world-leading research institute, where bioengineering principles meet today's challenges in biology, medicine, and environmental health to develop the solutions of tomorrow. CBI provides a highly international, multi-disciplinary environment with excellent opportunities for professional growth. You will be part of a dynamic, professional, and highly motivated team within a stimulating environment and gain international exposure through our partners and collaborators across Europe and the world. TUM offers a wide variety of inspiring and challenging PhD programs, which will supplement your research training with outstanding opportunities for career development, continued education and life-long learning.

Situated on the foothills of the Alps, Munich is consistently ranked as one of the most vibrant and enjoyable cities in the world, with an exceptionally high quality of life. Greater Munich is also home to several world-class universities and research institutes, creating a truly inspiring intellectual atmosphere.

The successful applicant will initially have a 3-year contract, with the possibility of extension. Salary will commensurate with work experience and seniority (TV EntgO Bund EG 13-75%). To promote diversity, we welcome applications from talented people regardless of gender, cultural background, nationality, ethnicity, sexual identity, physical abilities, religion, and age. Qualified applicants with physical disabilities will be given preference.

Your application:

We are looking forward to receiving your comprehensive application including your letter of motivation, CV and academic transcripts of records preferably in English and in a single PDF file, via email

to philipp.koehler@tum.de. Please indicate “PhD student in multimodal preclinical imaging/sensing of cardio-metabolic diseases".

For any question, please contact:

Dr. Philipp Köhler
email: philipp.koehler@tum.de
tel.: 089- 4140 9156

Technical University of Munich (TUM)
Chair of Biological Imaging (CBI)
Ismaningerstr. 22
81675 Munich, Germany

Web pages:
https://web.med.tum.de/en/cbi/home/
https://www.translatum.tum.de
https://www.pioneercampus.de
https://www.linkedin.com/company/munichimaging/
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Im Rahmen Ihrer Bewerbung um eine Stelle an der Technischen Universität München (TUM) übermitteln Sie personenbezogene Daten. Beachten Sie bitte hierzu unsere Datenschutzhinweise gemäß Art. 13 Datenschutz-Grundverordnung (DSGVO) zur Erhebung und Verarbeitung von personenbezogenen Daten im Rahmen Ihrer Bewerbung. Durch die Übermittlung Ihrer Bewerbung bestätigen Sie, dass Sie die Datenschutzhinweise der TUM zur Kenntnis genommen haben.

Kontakt: philipp.koehler@tum.de