



The Research Group “**Experimental Imaging and Image-guided Therapy**” of the University Cologne (Prof. Dr. Holger Grüll) is offering

Two PhD Positions “MR-HIFU for Cancer Therapy”

which are both funded within the EU project IMAGIO (28 partners, 4 years funding). Main topic of research is High-Intensity Focused Ultrasound (HIFU) for treatment of cancer. HIFU allows non-invasive heating or mechanical destruction of tissue and is performed under magnetic resonance image guidance (MR-HIFU). Clinically, MR-HIFU is used at the department of radiology at the hospital of Cologne to treat uterine fibroids and bone-related cancers, with four ongoing clinical trials in new indications. New areas of application include HIFU-induced local drug delivery, histotripsy and immune stimulation.

We are looking for:

- A scientist with a Master degree in biology, (biomedical) engineering, chemistry, physics or related fields to perform research on new MR-HIFU-based cancer treatments.
- Tasks include:
 - Active support of and participation in public funded ongoing research projects.
 - Technical and preclinical research on MR-HIFU hyperthermia (PhD 1)
 - Preclinical MRI-HIFU research on local drug delivery and immune therapy (PhD 2)
 - Obtaining a FELASA certificate for in-vivo research is required for both topics!

We offer:

- An attractive clinical and scientific environment, with full access to a comprehensive spectrum of state-of-the-art MR-HIFU equipment, radiological procedures, facilities and research tools.
- A good working atmosphere in a dynamic and interdisciplinary department.
- Interdisciplinary collaboration with other departments and partners (science and industry)
- a fixed-term 3-year contract with option for one year extension.

To be successful in this role you will need to have in addition to the basic requirements:

- Ideally first experiences with ultrasound or MRI, or willingness to familiarize yourself with the subject MR-HIFU in detail.
- First experiences with programming (e.g. Python or Matlab, especially for PhD 1).
- Fluency in English.
- Quick comprehension, coordination and organisational skills, ability to work in a team

For further details, please contact Prof. Holger Gruell per email or phone to set up an appointment. **I am present at the EMIM in Salzburg.**

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