

Research profile for applicants

Name of DKFZ research division/group:	<i>Translational Molecular Imaging (E280)</i>
Contact person:	<i>Leif Schröder, leif.schroeder@dkfz.de, 42-2432</i>
Group homepage: <i>Visit this website for further information on current research and recent publications.</i>	<i>https://www.dkfz.de/en/translationale-molekulare-bildgebung/index.php</i>

RESEARCH PROFILE AND PROJECT TOPICS

Research of the Translational Molecular Imaging (TMI) Division focuses on the development and characterization of targeted imaging reporters for translating novel detection techniques into diagnostic applications in oncology. We have different biosensor constructs in the pipeline that we plan to investigate in cell culture/organoids and in preclinical animal studies. Our team would be highly interested in candidates with a background in cell biology or preclinical imaging to contribute to our efforts in visualizing key molecular changes in cancer onset and progression. Candidates would learn powerful techniques from the emerging field of hyperpolarized MRI. We capitalize on the strong interdisciplinary magnetic resonance tradition in Heidelberg. To this end, we explore novel approaches based on advanced techniques like xenon-129 MRI and saturation transfer in exchange-coupled spin systems (CEST contrast). Our interdisciplinary team comprises members from a diverse background and strives to combine key techniques from physics, biochemical engineering, and molecular biology to develop the next generation of ultra-sensitive imaging reporters. We maintain several international collaborations, including partners at the Weizmann Institute of Science, the University of Oulu, and the California Institute of Technology.



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