

Details

Advanced Molecular Imaging Research Center (AMIR)

The main focus of the Advanced Molecular Imaging Research Center (AMIR) is multimodal imaging of small animals (mice, rats) for pre-clinical and translational research. Our goal is the integration of cellular research and clinical projects in development and implementation of novel and advanced techniques for small animal imaging – in particular in vivo magnetic resonance imaging (MRI), as well as small animal Ultrasound, μ CT and NMR spectroscopy. Main Areas of AMIR are preclinical imaging in Oncology, Cardiovascular Research and Neurological and Neuroscientific Research. The core competence of AMIR includes: - development of methods, technologies and measurement techniques in particular for MRI and their application in biomedical research. - development of new targeted agents for molecular imaging. - ^{13}C -Hyperpolarization. - Spectroscopic CT based imaging. - development of methods, algorithms and software solutions for data evaluation. AMIR is open to collaboration of scientists from the Medical Faculty of University Freiburg as well as for outside researchers on a national and international level. Access for industrial users is handled through our MR development and research center (www.mrdac.com).

Address: Killianstraße 5a
79106 Freiburg
Baden-Württemberg
Deutschland
[To website](#)

Host Institution

Universitätsklinik Freiburg, - Klinik für Diagnostische und Interventionelle Radiologie, Medizin Physik
Killianstraße 5a
79106 Freiburg
Baden-Württemberg
Deutschland
<https://www.uniklinik-freiburg.de/mr-en.html>

Scientific Domain

Primary Subjects:

- Biology
- Medicine

Secondary Subjects:

- Agriculture, Forestry, Horticulture and Veterinary Medicine
- Chemistry
- Physics

Category

Biomedical Imaging Facilities

Scientific Services

The services of AMIR include: - consultation and support in the definition and selection of suitable imaging methods and protocols to answer the scientific questions of our research partners. - animal housing and handling. - development of methods, technologies and setting up of protocols for collaborative studies. - conductance of experiments. - data processing and evaluation. - support in all regulatory issues relevant for the conductance of experiments. - training of users in basic and advanced concepts of small animal imaging.

Scientific Equipment

- 7T small animal-MR (Bruker Biospec 70/20) with cryo-coil
- 9.4T small animal-MR (Bruker Biospec 94/20)
- Small animal ultrasound (VisualSonics Vevo3100)
- 13 C-Hyperpolarizer (PHIP and SABRE, home built)
- Spectral μ CT (homebuilt, in vitro)
- 7T small animal-MR (Bruker PharmaScan) with cryo-coil
- NMR Spectrometer (AVANCE NEO 400MHz WB) with imaging option
- μ CT (Bruker, SkyScan 1276, in vivo)

Keywords

Networks

CRC 850

<https://www.sfb850.uni-freiburg.de/>

BrainLinks BrainTools

<https://www.brainlinks-braintools.uni-freiburg.de/>

DKTK

<https://dktk.dkfz.de/de/standorte/freiburg>

Users per annum

Internal Users: 11

External Users in total: 24

External Users: 20

External Users in the EU: 4

External Users outside of EU: -