



UNSER **TEAM**
BRAUCHT SIE!

**UNIVERSITÄTS
FREIBURG · BAD KROZINGEN
HERZZENTRUM**

Fully-Funded PhD studentship

In the Institute for Experimental Cardiovascular Medicine, within the Section for Cardiac NanoDynamics/4D Imaging, we have an open PhD position.

Research will cover:

- Dynamic effects of mechanical deformation (stretch, contraction) on intracellular cardiac 3D nano-structure and -function (diffusion, ion homeostasis), using approaches including molecular biology, mechano-manipulation, electron tomography, confocal imaging, FRAP, and CLEM;
- Dissecting the effects of cardiac disease on cellular ultrastructure, and testing of interventions (in vitro);
- Development (design and testing) of novel optical sensor tools.

Studies will span multiple disciplines and, hence, be associated with multiple sections of the IEKM (see <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6815290/>). All projects will utilise a broad range of methodologies, including molecular biology (e.g. vector design), biochemistry (e.g. western blotting), and biophysics (e.g. advanced light and electron microscopy, single cell stretch), involving experimentation with human material, computational modelling, and much more. Successful applicants will be closely associated with the recently funded Collaborative Research Centre SFB1425, which is integrated by IEKM and studies the Heterocellular Nature of Cardiac Lesions.

We offer:

- An outstanding international (English-language) and interdisciplinary scientific environment with flat hierarchies;
- Access to up-to-date laboratories, cutting-edge technologies and state-of-the-art infrastructure;
- Highly personalized supervision at the forefront of integrative biomedical sciences;
- A diverse and vibrant environment in one of the most desirable places to live as a student in Europe (located at the crossroads of Germany, France, and Switzerland, Freiburg is extremely convenient for European travel);
- Membership of the Spemann Graduate School of Biology and Medicine (SGBM), offering additional networking opportunities, translational skills training, and career guidance.

Qualifications and Requirements:

- Self-motivated students who hold (or are about to complete) an excellent (e.g. sehr gut or upper second) MSc or equivalent in a discipline relevant to biomedical research such as biology, biophysics, bioengineering, medicine, physiology;
- Research experience with biochemical, biophysical, and/or imaging methods;
- Hands-on track record with molecular biology or electrophysiology is highly desired;
- Scientific curiosity and the drive to actively shape your own research project are a must;
- Excellent communication skills in English (B2 or higher).

The position is available for three years in the first instance.

Please submit your application with all relevant documentation by 13 August 2021.

If you have any queries, you may contact Dr. Rog-Zielinska by mail: eva.rog-zielinska@uniklinik-freiburg.de.

However, we kindly request that you submit your application via the System.



General information: Salary is assigned according to a pay scale. Unless prevented by operational or legal reasons, full-time positions are generally open to those wishing to job share. Where two candidates are equally suitable for a post, severely disabled candidates are given priority. Employment decisions are made by the Personnel Department.