

Postdoc (m/f/d) and PhD student (m/f/d) in Cardiac Physiology

At the Institute of Cellular and Molecular Physiology of the Friedrich-Alexander-University (FAU) Erlangen-Nürnberg a postdoc (m/f/d) and a PhD student (m/f/d) position are available from 01.10.2022 for an initial period of 2 years within externally funded projects (e.g. DFG). We are looking for highly motivated individuals passionate about cardiac research.

Project:

We investigate the causes and consequences of pathophysiological changes in heart failure and arrhythmias (excitation-contraction coupling, fibrosis, electrophysiology). Alterations in the transverse tubular system of cardiac myocytes contribute significantly to arrhythmogenesis and reduced contractility in heart failure. The underlying causes and signaling pathways, however, remain largely unclear. A main goal of this project is to elucidate the molecular mechanisms leading to t-system loss in isolated cardiomyocytes and intact cardiac tissue.

Methods and Tasks:

- Experimental work with laboratory animals and human tissues
- Culture of isolated cardiomyocytes and human cardiac tissue slices
- Microscopic and electrophysiological examination of cells and tissues (confocal and live cell microscopy, calcium imaging, patch clamp technique)
- PCR, Western blot, reporter assays
- Transfection of cells and tissues
- Involvement in teaching physiology to medical students is possible and encouraged
- Postdoc: Participation in the supervision of PhD students and theses

Profile / Qualifications:

- Completed studies (Master, Diploma) in life sciences, biophysics, biomedical engineering, medicine or a comparable course of study
- For the postdoc position a PhD or MD is required
- Proficiency in in-vitro techniques and molecular biological methods
- Experience with immunohistology, confocal microscopy and electrophysiology is desirable but not a prerequisite
- Experience with scripting or programming languages (e.g. Matlab, Python), image processing and numerical simulations is an advantage
- Good knowledge of English and German or willingness to learn German

What we offer:

- Broad spectrum of methods, including tissue culture from human myocardial samples ("living myocardial slices"), superresolution microscopy and advanced image processing
- Close collaboration with clinicians
- Extensive training and support by experienced personnel + support by technical staff
- If applicable, training and continuing education in student teaching
- Authorization for certification in human physiology (Facharztbezeichnung Physiologie / Fachphysiologe)
- Payment according to TV-L E13 (postdoc: 100%, PhD student: 65%)
- PhD student: participation in the PhD academy of the IZKF Erlangen
- Postdoc: Possibility for habilitation

Duration of Employment: initially 2 years, possibilities for extension are given

Contact: Please send the usual application documents (letter of motivation, CV, references) collected as a PDF to PD Dr. med. Thomas Seidel (thomas.seidel[at]fau.de) and/or Prof. Dr. Tilmann Volk (tilmann.volk[at]fau.de).