

The **Rudolf Virchow Center/Research Center for Experimental Biomedicine** of the **University of Würzburg** invites to apply for a position as a

PhD Student (Physics/Biophysics)

In the field of Single Molecule Imaging and Spectroscopy

Understanding the structural dynamics of G-protein coupled receptor (GPCR) activation is one key for the development of novel drugs. Although inactive and active structures of GPCRs have been solved during the past few years, recent biophysical studies suggest that GPCRs operate beyond a two-state 'on'-'off' model. Influenced by ligands this seem to involve several rapid (<millisecond) activation steps that we would like to tackle with a combined FRET-FCS approach (Fluorescence Resonance Energy Transfer and Fluorescence Correlation Spectroscopy).

The project involves multi-color live-cell FCS, FCCS and FRET of GPCRs, data analysis and modeling. The overall goal is to decipher fast inter- and intramolecular GPCR dynamics that are typically not accessible using classic fluorescence imaging. The project particularly requires enthusiasm for single molecule approaches and membrane biophysics.

We are interested in PhD candidates with strong background in fluorescence spectroscopy or/and single molecule techniques holding a Master's degree in Physics, Biophysics or an equivalent level of professional qualifications and experience. Ideally, the candidate has experience in Fluorescence Correlation Spectroscopy and related methods. Advanced skills in modeling and analysis of molecular dynamics is desired, however not a prerequisite.

The project is a close collaboration of the group of Dr. Katrin Heinze and Prof. Dr. Martin Lohse.

The position is initially funded for a period of one year and will be extended in the case of a positive evaluation. The salary for this temporary position is commensurate with training and experience according to salary agreement (TV-L, for a PhD candidate, the position is part-time (65%) for a three-year dissertation). Female scientists are particularly encouraged to apply. Disabled applicants will be preferentially considered in case of equivalent qualification.

Applications including cover letter, detailed CV, and contact information of two referees, should be sent to

katrin.heinze@virchow.uni-wuerzburg.de