



UNIVERSITÄT
LEIPZIG



DOCTORAL RESEARCHER (M/F/D)

remuneration: salary group 13 TV-L

65% of a full-time position

The **Institute of Medical Physics and Biophysics of the University of Leipzig** seeks to fill two doctoral positions starting from March 1st, 2020 or at the earliest opportunity. The PhD positions are embedded in the research consortium CRC1423 *Structural Dynamics of GPCR Activation and Signaling* and will be hosted in the research group for *biophysical computer simulations* of Professor Dr. Peter Hildebrand.

Leipzig offers an international and stimulating environment for G protein coupled receptor (GPCR) research, a key area in pharmacological research. Positions are open in the newly funded collaborative research center CRC1423 involving institutions from Leipzig, Berlin and Halle. GPCR dynamics plays an essential role in ligand binding, receptor activation and specific downstream signaling. By means of molecular dynamics (MD) simulations we investigate the dynamic properties of GPCRs, evaluate important interaction events with ligands and downstream signaling proteins with the aim to improve the understanding of GPCR function and to develop drugs with improved pharmacological properties. Two highly motivated students are sought to contribute to the group's efforts in this area of research.

Specific focus

- The successful applicant will be involved in set up and analysis of classical MD simulations and sampling of GPCRs conformational states to investigate binding of peptide ligands to GPCRs and evaluate the effect of ligand binding to G protein or arrestin coupling.
- She*He will communicate results from computational analysis to collaboration partners and develop novel workflows for automated analysis.
- The framework of the project includes close collaborations with other experimental research groups within the CRC working with complementary methods such as NMR or mutational analysis or with international collaboration partners from Stanford University or Beijing.

Requirements:

- The candidate should have a master degree in biophysics, bioinformatics, medicinal chemistry or a related field and experience in setup and analysis of molecular dynamics simulations or related computational methods.
- Excellent communication and presentation skills and the ability to work in an international environment are expected.
- Expertise in GPCR related research and enhanced sampling techniques would be considered a bonus.
- Familiarity with scientific programming would be considered an additional advantage.

Please send your application with the usual documents preferably by e-mail in a single pdf file by no later than 31 January 2020 to

Jessika.schloegel@uni-leipzig.de.

Prof. Dr. Peter Hildebrand

Institut für Medizinische Physik und Biophysik

Universität Leipzig

Härtelstraße 16-18,

D - 04107 Leipzig

<http://proteinformatics.de>

Please note that applying by email is not entirely secure and may pose a privacy risk. The sender assumes full responsibility.

Severely disabled persons are encouraged to apply and will be given preference in the case of equal suitability.