



PhD STUDENT POSITION / RESEARCH ASSISTANT (m/f/x)

Molecular control of G protein-coupled receptor signaling

A PhD position is available starting 1 January 2021 at the Faculty of Life Sciences, Leipzig University, to study the activation of G protein-coupled receptors (GPCRs) within the newly established collaborative research project “Structural Dynamics of GPCR Activation and Signaling” (DFG SFB1423; subproject B03).

GPCRs are the largest class of transmembrane proteins with a huge variety of ligands. They have essential functions in health and disease, and are the molecular target for one third of all current pharmaceuticals. Peptide- and protein-activated GPCRs are still underrepresented in the clinical intervention, but the number of peptide therapeutics is constantly increasing. Understanding how peptide ligands interact to their receptors, and which pathways are triggered downstream of receptor activation is an essential step toward the development of more potent and selective drugs.

Specific focus:

(i) One main aim of the project is to identify and compare different contact interfaces of peptide ligands at their receptors with respect to their role for ligand affinity and activation of different signaling pathways (G protein, arrestin), eventually aiming at the rational design of functionally selective (biased) ligands. This will be mainly done in cell culture-based experiments. (ii) In another part of the project, we collaborate with *C. elegans* biologists in the network of the SFB1423 to develop simple in vivo testing platforms to evaluate the activity of biased ligands in a more physiological surrounding.

Your profile:

We seek a highly motivated and open-minded PhD student holding a recent M.Sc. degree in Biochemistry or Biology (or equivalent) with strong interest in GPCR biology. A solid background and practical experience in cell biology and molecular biology is expected. Experience in FRET/BRET techniques, fluorescence imaging, solid-phase peptide synthesis or molecular modeling are a plus. The successful candidate should be able to work independently as well as in a team, have good communication skills, and be fluent in English (written/spoken). Professional self-organization and data-handling are mandatory.

We offer:

We offer modern equipment in spacious labs, a multi-disciplinary approach with state-of-the-art techniques, and a good working atmosphere in a young team. The position is initially limited until 12/2023 with salary according to TVL EG 13-65% (with possibility of extension, third-party funds). Severely disabled persons are encouraged to apply and will be given preference in the case of equal suitability.

Interested?

Please send your application including motivation letter, CV, copies of certificates, abstract of Master's thesis and contact information of two references (in a single pdf file) to anette.kaiser@uni-leipzig.de.

