

PhD student position in Protein Biochemistry/Structural Biology



Project Title: Mechanisms of Wnt protein secretion

Contact:

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JOB DESCRIPTION

Our research group located at the Heidelberg University Biochemistry Center (BZH) performs cutting-edge research on the structural and functional analysis of molecular machines involved in protein synthesis and targeting, including membrane proteins of key importance in signaling. In addition to our long-standing interest in the SRP and GET pathways for protein secretion and membrane insertion, we are now addressing the secretion of Wnt proteins by a specialized machinery. Wnt proteins are glycoproteins that require a lipid modification for their activity, and Wnt signaling pathways play a central role in developmental processes. We aim to obtain structural snapshots of proteins and complexes along the Wnt secretory pathway to dissect the molecular mechanisms of this secretion route. This project is a collaborative effort with the group of Michael Boutros (DKFZ). Preliminary data ensuring a smooth start of this project are available.

KEY WORDS

Membrane protein biochemistry and structure determination, Wnt secretion and signaling.

TECHNIQUES APPLIED

The successful candidates will apply a variety of approaches central to structural biochemistry and molecular cell biology of membrane proteins, including high-end membrane protein expression, purification, characterization (e.g. BLI, MST, ITC, XL-MS, lipidomics) and structure determination using single-particle cryo-EM (access to high-end cryo-EM instrumentation as part of HDcryoNET) and X-ray crystallography (inhouse crystallization platform).

The ideal candidate will strengthen our team and will be part of a thriving collaborative research community. Communication of results at meetings, conferences, etc. and through high-impact publications is integral to your development as scientist.

DESIRED QUALIFICATIONS

Master in biochemistry or structural biology; strong interest in membrane protein research and integrated structural biology.

The position is in the structural biology team headed by Prof. Irmgard Sinning (www.bzh.uni-heidelberg.de/sinning/) at the BZH of Heidelberg University, one of the leading research Universities in Europe in an excellent scientific environment. Application deadline is 15th January.

We are looking forward to your application including a CV, (degree) certificates, a letter of motivation and contact details of two referees (or letters of reference). Please send your application as single pdf document by email to: irmi.sinning@bzh.uni-heidelberg.de.

Heidelberg University is an equal opportunity employer. Qualified women are therefore particularly encouraged to apply. Applicants with disabilities are treated with preference given comparable qualification.