

# Postdoc position in Protein Biochemistry/Structural Biology



**Project Title: Structural Basis of O-mannosylation**

**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. We are interested in protein glycosylation, an abundant and diverse post-translational modification, in which specific amino acids are covalently linked to carbohydrates. Protein O-mannosylation is preserved across all kingdoms of life, and defects within the mannosylation machinery interfere with cell wall integrity and ER homeostasis in yeast, and often cause growth defects, embryonic lethality or severe congenital disorders of glycosylation (CDG). In eukaryotes, N-glycosylation is tightly linked to the import of membrane and secretory proteins into the ER, however, the exact mechanism needs yet to be defined. The project aims to dissect the molecular mechanism of O-mannosylation in yeast and human. We use a multi-disciplinary approach to gain insights into the structure and function PMTs and POMTs, and their interaction with protein substrates. Preliminary data ensuring a smooth start of the project are available.

**KEY WORDS**

Membrane protein biochemistry and structure determination, mannosyltransferases (PMTs and POMTs).

**TECHNIQUES APPLIED**

The successful candidate 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 and structure determination using X-ray crystallography (inhouse crystallization platform) and single-particle cryo-EM (access to high-end instrumentation as part of HDcryoNET).

**DESIRED QUALIFICATIONS**

PhD in biochemistry or structural biology; strong interest in membrane protein biochemistry and O-mannosylation; helpful: experience in cryo-EM.

The successful candidate will be part of the structural biology team headed by Prof. Irmgard Sinning ([www.bzh.uni-heidelberg.de/sinning/](http://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. The salary is in accordance to the Public Sector Collective Agreement on Länder (TV-L E13). Application deadline is 15<sup>th</sup> of January.

We are looking forward to your application including a CV, (degree) certificates, a list of publications, 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.