PhD Position in Mitochondrial Membrane Biology (f/m/d)

The Meinecke Lab at the Biochemistry Center of Heidelberg University invites applications for a fully funded PhD position. The project focuses on mitochondrial membrane organization, lipid transfer, and structural biology in one of Europe's leading life science research environments.

Mitochondria are dynamic organelles whose function depends on the precise organization of their membranes. The inner mitochondrial membrane is – among others - shaped by the MICOS (Mitochondrial Contact Site and Cristae Organizing System) complex, while lipid transfer processes – mediated by conserved proteins such as Ups1/PRELID – maintain membrane composition and function. Understanding how membrane architecture, lipid transport, and membrane biophysics are integrated remains a central challenge in cell biology.

Project Overview

This project aims to uncover the molecular mechanisms linking membrane structure, lipid transfer, and protein function in mitochondria. The work will focus on:

- Mechanistic and structural analysis of the MICOS complex
- Lipid transfer pathways mediated by Ups/PRELID proteins
- Interplay between membrane lipid composition and protein activity

The project combines a multidisciplinary approach including protein biochemistry, cell biology, in vitro reconstitution, in vivo analysis, lipidomics, advanced fluorescence microscopy, and structural methods such as cryo-electron microscopy and tomography.

Your Profile

We are seeking a highly motivated and curious candidate with a strong interest in fundamental biological questions. Applicants should hold (or be close to obtaining) a Master's degree in biochemistry, biophysics, molecular biology, or a related field.
You should bring:

- A solid background in biochemistry, biophysics, cell biology, or structural biology
- Interest in membrane biology and mitochondrial function
- Experience in molecular biology, protein biochemistry, cell culture and/or microscopy (advantageous but not required)
- A collaborative mindset and strong communication skills in English

Our Environment
We foster a supportive, inclusive, and collaborative culture, valuing open communication, mutual respect, and a healthy balance between scientific ambition and personal well-being. Our lab is integratied into the Heidelberg research environment. Heidelberg is internationally recognized as a premier hub for biomedical research, offering a highly collaborative and interdisciplinary environment with access to state-of-the-art core facilities and training opportunities.

What We Offer

- A fully funded PhD position at a world-class research location
- Training in cutting-edge approaches including cryo-EM and membrane reconstitutions
- Access to outstanding infrastructure and international collaborations
- Opportunities for professional development and conference participation

The position is available from now and funded by the Collaborative Research Center 1638 (www.sfb1638.de/). The project can be embedded in a structured graduate program in Heidelberg.

How to Apply
Please submit your application as a single PDF including a motivation letter, CV, a brief statement of research interests, and contact details of two referees to **michael.meinecke@bzh.uni-heidelberg.de** by **April 10, 2026**.