



European Research Council



## Postdoc and PhD Student Positions available at IMB Mainz, Germany

### Exploring the Ubiquitin Code in Genome Maintenance and Beyond

The [Ulrich lab](#) at the Institute of Molecular Biology ([IMB](#)) Mainz, Germany, is looking for a PhD student and/or a postdoctoral researcher interested in exploring novel functions of the ubiquitin system in genome maintenance and other signalling pathways. In an ERC-funded project, we are investigating how the structure of polyubiquitin chains impinges on pathways related to DNA replication and repair, but also to other areas of cell biology.

For this purpose, we have developed a proteomics-based method to systematically isolate cellular factors associated with individual polyubiquitin linkages. By applying this technique in human cultured cells and budding yeast, we aim to identify novel ubiquitylation targets, relevant enzymes as well as downstream effectors of linkage-specific polyubiquitylation. Successful applicants will perform linkage-based screening under defined stress conditions to investigate the impact of polyubiquitylation in relevant biological contexts, for example in ubiquitin-dependent DNA damage signalling and repair, in the DNA replication stress response, and in newly emerging areas resulting from the screen. Downstream functional analyses will involve biochemical as well as cell and molecular biological approaches. In this manner, the project aims to elucidate the relevance of linkage-specific ubiquitin signalling in cellular resilience mechanisms against ageing and disease.

We are looking for motivated team players with a strong background in molecular or cell biology, biochemistry or a related field and excellent communication skills in English.

Depending on your career stage, we offer a fully funded PhD student position within IMB's International PhD Programme ([IPP](#)) or a full-time postdoctoral position (TV-L E13) for up to 4.5 years in a stimulating, international research environment with access to state-of-the-art infrastructure and Core Facilities.

#### How to apply

Informal enquiries should be sent to Prof. Helle Ulrich ([h.ulrich@imb-mainz.de](mailto:h.ulrich@imb-mainz.de)). PhD student candidates are required to also apply formally via IMB's International PhD Programme [here](#) (deadline: 3<sup>rd</sup> April, 2025). Postdoctoral candidates should send their CV, a brief motivation letter and the names and e-mail addresses of two references directly to Prof. Helle Ulrich.

#### Publications relevant to this project

1. Renz C, Asimaki E, Meister C, Albanèse V, Petriukov K, Krapoth NC, Wegmann S, Wollscheid HP, Wong RP, Fulzele A, Chen JX, Léon S and Ulrich HD (2024) Ubiquiton - An inducible, linkage-specific polyubiquitylation tool. *Mol Cell*, 84:386-400
2. Yakoub G, Choi YS, Wong RP, Strauch T, Ann KJ, Cohen RE and Ulrich HD (2023) Avidity-based biosensors for ubiquitylated PCNA reveal choreography of DNA damage bypass. *Sci Adv*, 9:eadf3041
3. Wegmann S, Meister C, Renz C, Yakoub G, Wollscheid HP, Takahashi DT, Mikicic I, Beli P and Ulrich HD (2022) Linkage reprogramming by tailor-made E3s reveals polyubiquitin chain requirements in DNA-damage bypass. *Mol Cell*, 82:1589-1602