

The University Hospital Bonn is a maximum care facility with a regular capacity of 1.300 beds. Our current staff of more than 9.000 performs assigned duties in research, teaching and medical treatment, including the use of advanced medical technologies, and public health care services at the highest possible level. Interested applicants will be offered a wide range of employment opportunities in a variety of fields.

At the Institute of Biochemistry and Molecular Biology, University of Bonn Medical School, Germany is available a

PhD position (TV-L E13 65%) (m/f/d)

Mitochondria fulfil various essential functions for the survival of eukaryotic cells. Their biogenesis and functions depend on the import of more than 1000 different proteins that are produced as precursors on cytosolic ribosomes. Impaired mitochondrial targeting or defective import into mitochondria result in cytosolic accumulation of such proteins, causing proteotoxic stress. As a result, mitochondrial proteins aggregate in different cellular compartments, a hallmark of neurodegenerative diseases. Our biochemical and proteomic studies identified partner proteins of protein translocases acting in guiding proteins to mitochondria or their removal when import fails (Opalinski et al., 2018; Schulte et al., 2023 Nature; Mårtensson et al., 2019 Nature). We will study the molecular mechanisms of targeting and quality control of mitochondrial precursor proteins.

We use highly innovative techniques in biochemistry, molecular and cell biology. This includes robot based genetic screens combined with fluorescent imaging and protein-protein-interaction studies coupled with proteomic assays. We study the functionality and fate of proteins using protein stability, aggregation, disaggregation assays and analyse the state of post-translational modifications with ubiquitin-family proteins. Moreover, we reconstitute the import and assembly of mitochondrial proteins synthesized in cell-free systems into intact organelles *in vitro*. We offer a well-equipped workspace in an active international team. The University of Bonn provides an excellent scientific research environment.

The position starts as soon as possible and is for a period of three years, with the possibility of an extension.

The ideal candidate will be a highly motivated, team-oriented graduate with a strong interest in protein biochemistry, molecular and cell biology. Experience with biochemical, cell and molecular biology techniques or proteomics is advantageous. Candidates should hold a diploma or a master's degree in Biology, Biochemistry, Molecular Medicine, Chemistry or a related subject.

We offer:

- The salary will be according to the German salary scale TV-L E13 65%
- Supportive mentoring and a well-equipped laboratory
- A "Großkundenticket" (subsidized public transport) is available
- There is also a possibility to use the day care center
- Supplementary benefits in the public sector (pension plan according to VBL)

The University of Bonn is committed to diversity and equal opportunity. It is certified as a family-friendly university. It aims to increase the proportion of women in areas where women are under-represented and to promote their careers in particular. It therefore urges women with relevant qualifications to apply. Applications will be handled in accordance with the Landesgleichstellungsgesetz (State Equality Act). Applications from suitable individuals with a certified serious disability and those of equal status are particularly welcome.

Applications by email only can be sent to thbecker@uni-bonn.de. Please refer to the application number ST-30001.

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