Two PhD positions in Cellular Protein Biochemistry

Two PhD positions are available in the laboratory for Cellular Protein Biochemistry at the Technical University of Munich (TUM) Department of Bioscience within an ERC-funded project.

Our laboratory aims at understanding how proteins fold, assemble and are scrutinized by the cellular quality control machinery. We are particularly interested in proteins of the secretory pathway - proteins that are ultimately secreted or localized on the cell surface and allow cells to interact with their environment. We use an interdisciplinary approach from protein biochemistry to cell biology to analyze the machinery and mechanisms that monitor cellular protein biogenesis.

THE PROJECTS: Membrane proteins make up one third of the human proteome. They are critical for any cellular function from movement to immune defense. Membrane proteins are major drug targets and their mutations cause numerous severe human diseases. Despite these key roles in biology and medicine, cellular mechanisms of membrane protein biogenesis and control remain ill-defined.

The projects will investigate how molecular chaperones support and control membrane protein biogenesis. They will focus on three major aspects: First, novel endoplasmic reticulum chaperones we have identified in our lab with hitherto mostly unknown functions. Second, on the question of how molecular chaperones work together on a molecular level to support and control membrane protein biogenesis. And third, the projects will dissect how membrane protein chaperones recognize clients.

Both projects have the potential to provide exciting new insights in the molecular biology of cells. To achieve this, the project will use state-of-the-art cell biological approaches from microscopy *via* gene-knockouts to mass spectrometry and will build on our existing collaborations with cryo-EM labs.

YOUR PROFILE: You should hold a Diploma/Master's degree (or equivalent) in Biochemistry, Cell Biology or related fields. Previous experience in mammalian cell culture and protein biochemistry is required. Experience in gene editing techniques, protein mass spectrometry, structural biology and/or fluorescence microscopy is a benefit.

THE ENVIRONMENT AND THE POSITION: The Technical University of Munich (TUM) is a leading research university in Europe. We are offering excellent working conditions, participation in a structured PhD program at the TUM graduate school and an international research environment. The salary is in accordance to the Public Sector Collective Agreement on Länder (TV-L E13/65%). The position is available from June 2023 on. Only applications received until Mar 31st 2023 will be considered.

The application should contain a CV, (degree) certificates, a letter of motivation and at least two possible references. Please send your application as **a single pdf-document** by email to: matthias.feige@tum.de

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

further information: www.bio.nat.tum.de/cell/home/