Master's Thesis in Immune Protein Engineering

A Master's thesis project is available in the laboratory for Cellular Protein Biochemistry at the Technical University of Munich, Department of Chemistry.

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 that 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. One major model system in our laboratory are interleukins, key signaling molecules in the immune system.

CURRENT PROJECTS:

One major interest of our lab is the cellular folding, assembly and quality control of IL-12 family cytokines. In recent years, we have provided insights into their biogenesis and structural setup (e.g. Müller et al, PNAS, 2019; Meier et al., Nat Commun, 2019). Using these insights, we further seek to understand cellular interactions of IL-12 cytokine subunits and rationally engineer cytokines as potential biopharmaceuticals. The candidate will work on engineering approaches in our lab and have the opportunity to learn and apply a wide variety of state-of-the-art techniques from mammalian cell biology to biophysical protein characterization and work on an exciting project of immediate biomedical relevance. The starting date is flexible upon mutual agreement.

YOUR PROFILE:

The applicant should hold a BSc in Biochemistry or related fields. Experience in experimental protein biochemistry and cell biology is a benefit.

The application should contain a CV, (degree) certificates and a letter of motivation. Please send your application (single pdf-document) by email to: Isabel.aschenbrenner@tum.de

further information: www.cell.ch.tum.de