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PhD student / Doktorand/in (E13, 65%)

Mitochondrial architecture and function

The membrane architecture of mitochondria directly influences the organelle's functionality and efficiency, and its disruption is associated with human disease. The characteristic cristae membranes are topologically and functionally specialized for optimal respiration. Cristae morphology is governed by the balanced actions of several protein complexes of the inner membrane, including the widely conserved MICOS complex (mitochondrial contact site and cristae organizing system) and the F_1F_o-ATP synthase. MICOS is required for the stability of crista junctions that connect the cristae membranes to the smooth areas of the inner membrane, while dimeric F_1F_o-ATP synthase induces the strong membrane curvature at crista rims. We have recently discovered a regulatory crosstalk between the two machineries involving the MICOS subunit Mic10.
We offer a PhD position to investigate how these two machineries collaborate to control cristae biogenesis and remodeling. The project is funded by the DFG (German Science Foundation). We employ a wide range of biochemical methods for the study of native membrane protein complexes, as well as techniques from molecular biology and cell biology such as mitochondrial physiology measurements. These approaches will be supported by fluorescence and EM imaging performed in collaboration within a DFG-funded research consortium.

We are looking to recruit a highly motivated student with a strong background in biology / biochemistry and keen scientific interests. The position is available at the earliest possible date, we offer a salary according to E13 (65%). The Institute of Biochemistry and Molecular Biology at the University of Freiburg provides an excellent and stimulating research environment.
The University of Freiburg seeks to increase the number of female employees and therefore encourages qualified women to apply for the position. Applicants with disabilities (Schwerbehinderte) will be given preferential consideration in case of equal qualification.