



The Max Planck Institute of Biophysics is a leading international research institute that uses biophysical, biochemical and computational methods to investigate the structure, dynamics and function of cellular systems at the molecular scale. It consists of four scientific departments, multiple research groups and scientific core facilities, with about 200 employees from more than 25 countries.

Master Project/ HiWi position: Mechanisms of Cellular Proteostasis
Department of Molecular Sociology, Max-Planck Institute for Biophysics

As the nascent polypeptide chains emerge from the ribosome, they become exposed to the crowded cellular interior. Subsequently, those non-native interactions could trigger the misfolding of proteins and hence their aggregation or decay. Therefore, cells evolved chaperones which can engage with nascent polypeptide chains and shield them from non-native protein interactors leading to accurate protein maturation and folding. Here, we offer a project in which you will characterize a subset of chaperones and address their contribution to the cellular proteostasis system within *Saccharomyces cerevisiae*.

Working within the field of co-translational interactions will link RNA biology to proteomics and thus provides a dynamic and interdisciplinary project. The project will include cutting-edge mass spectrometry techniques and their data analysis, RT-qPCR assays to determine substrate specificity and fluorescence microscopy.

We encourage students with backgrounds in biochemistry, biophysics, pharmacy, molecular life sciences and related subjects for their application. Previous knowledge in the aforementioned methods can be beneficial, but is not necessary.

Duration: 6 months

Applicants should provide a CV including a list of previous projects with skills obtained throughout those projects and a recommendation letter. Moreover, the motivation for working on this project should become obvious within your application.

For further information and application submission, please contact maximilian.seidel@biophys.mpg.de and martin.beck@biophys.mpg.de.



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