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The Leibniz-Forschungsinstitut für Molekulare Pharmakologie (FMP) belongs to the Forschungsverbund Berlin e. V. (FVB). The FVB supports eight research institutes in Berlin, which are members of the Leibniz Association and financed by the Federal Republic of Germany and the federal states.

In the Junior Research Group "**Structure and mechanism of microbiome-driven diseases**" headed by **Dr. Daniel Roderer**

One DFG-funded PhD position in Cryo-EM and Structural Biology (f/m/d)

is to be filled **as soon as possible**. Salary is paid according to the German salary scheme for the public sector (TVöD Bund). Both positions are 65% positions for doctoral research, initially limited to **3 years** with the potential of extension.

Project description:

The focus of the junior research group of Dr. D. Roderer is on **molecular mechanism of microbiome-driven carcinogenesis**. We aim to close the current gap of knowledge between genome analysis, microbial and cellular data and structural details of **host-microbiome interactions**, which is an important prerequisite for **structure-based drug design**. In particular we address complexes between bacterial adhesins with human cell surface receptors by protein biochemistry, biophysics and structural biology, in particular **cryogenic electron microscopy (cryo-EM) and cryo tomography (cryo-ET)**. In the current project, we aim to understand the molecular mechanism of *Fusobacterium nucleatum* autotransporter adhesin binding to human target cells, both in vitro at near-atomic resolution using cryo-EM and single particle analysis and in the context of the cellular environment using cryo-ET.

Requirements:

We are looking for an ambitious, highly motivated, and talented graduate student who is enthusiastic to perform research in an outstanding and vibrant scientific environment. The applicant should be meticulous in their work, a team player, and have the wish to excel in science. The working language is English, knowledge of the German language is not required. A master degree in Biochemistry, Biophysics, Chemistry, Physics or a related subject with excellent grades is required, as well as profound experience in protein biochemistry or electron microscopy. Previous experience in structural biology (cryo-EM and/or X-ray crystallography) is advantageous.

Are you interested?

For further information, please contact Daniel Roderer (roderer@fmp-berlin.de). Please also see a recent project-related preprint: <https://www.biorxiv.org/content/10.1101/2024.02.28.582045v1>.

In 2013 the FMP has been awarded the certificate of the audit "Beruf und Familie" as family-friendly employer. We offer equal opportunities regardless of gender, age, ethnic origin or religion. We welcome applications of disabled candidates who will be given preference in case of equal qualification.

How to apply: Please combine all application documents (motivation letter, CV, bachelor & master degree, 1 page statement of research experience and interests, and the contact details of at least two references) into one pdf document and submit them latest until **August 31th, 2024** to roderer@fmp-berlin.de.

We are looking forward to your application!