PhD Position (f/m/d)

as part of the Graduate School *Infection* of the Leibniz Center Infection (LCI)

Project title: ***Analyzing Lassa virus proteins to identify novel antiviral targets***

The Leibniz Center Infection (LCI) is a strategic alliance of the North German Leibniz Institutes Bernhard Nocht Institute for Tropical Medicine (BNITM), Research Center Borstel – Leibniz Lung Center (FZB) and the Leibniz Institute of Virology (LIV). The LCI focuses on global infections and links the complementary research of the three Leibniz institutes: tropical and emerging infections at BNITM, bacterial infections of the lung at FZB and viral diseases at LIV (https://www.lc-infection.de/en/). The alliance provides a three-year structured graduate program on *Infection*.

The LIV focuses on human pathogenic viruses with the aim of understanding viral diseases and developing novel therapeutic approaches (https://www.leibniz-liv.de/). The LIV offers one doctoral position in collaboration with Dr. Maria Rosenthal (BNITM):

"Analyzing the structural conservation of LASV proteins to identify novel antiviral targets"

Main Supervisor: Prof. Dr. Maya Topf (Research Department *Integrative Virology,* https://www.cssb-hamburg.de/research/research_groups/topf_group/index_eng.html)

The Topf group employs and develops computational tools to study viral protein-protein interaction networks and perform structural modelling of protein complexes. The Rosenthal Lab uses structural biology, biochemistry and virology methods to investigate bunyavirus genome replication and transcription.

The joint PhD project between the labs aims to investigate the structure and function of Lassa virus proteins and their cellular binding partners, by integrating diverse data sources, including sequencing data, protein-protein interactions, and 3D structural data. Complemented by cell-based and *in vitro* mutagenesis studies, functional relevance of predicted structures and interactions will be assessed.

We seek exceptional, highly motivated candidates, holding a Master's degree in natural or life sciences for this project. Suitable candidates should have background in computational biology or computational chemistry, and ideally experience in bioinformatics and computational structural biology. Expertise in virology and biophysics will be considered an asset.

We offer the opportunity to perform cutting-edge research in an extremely stimulating work environment equipped with state-of-the-art technology. The Topf lab is located at the Centre for Structural Systems Biology (CSSB), which provides facilities and expertise specifically for structural biology studies (e.g. the cryoEM facility). The lab has access to the Maxwell Cluster at DESY as well as in-house GPU computers. The Rosenthal lab is located at BNITM and provides expertise in structural virology as well as *in vitro* biochemical and cell-based assay systems. An association of the Rosenthal lab with both CSSB and the Fraunhofer Institute for Translational Medicine and Pharmacology grants further access to high-end infrastructure and expertise for assay development and drug discovery. The position is initially funded for 3 years. Payment and social benefits will be in accordance with the regulations of the German TV-AVH (salary agreement for public service employees). LIV, BNITM and CSSB are international research institutes with English as the working language. The student will participate in seminars and other activities in all these institute and will benefit from the international

environment. Besides, all PhD students of LIV participate in the structured doctorate program of the institute including a variety of workshops and continuing education opportunities in the field of infectiology. For further information please visit the websites cssb-hamburg.de, liv-hamburg.de, and bnitm.de/en/, or contact Prof. Dr. Maya Topf (maya.topf@leibniz-liv.de).

Starting date will be beginning of 2024. The application should include a letter of motivation, CV and two names of referees. Please state your earliest possible starting date.

We look forward to receiving your complete and informative application in English language by **25.11.2023,** preferably by email as single pdf-file (not exceeding 5 MB) to the Human Resources of LIV (jobs@leibniz-liv.de). Late applications may be considered until the position is filled.

For project related questions, please contact: maya.topf@leibniz-liv.de.

The LIV promotes the professional equality between all genders. Severely disabled persons will be given preferential consideration in case of otherwise equal suitability, qualification and professional performance

Leibniz Association

Leibniz Institute of Virology (LIV) Human Resources
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TOTAL E-QUALITY