

Postdoc/PhD-student positions available: Development of broadly acting antivirals targeting conserved host cell mechanisms and viral structures.

PI: Prof. Michael Schindler, Institute for Medical Virology, Tübingen, Germany

Synopsis: The SARS-CoV-2 pandemic and its devastating impact on mankind, considering not only the viral death toll but also the socioeconomic consequences of the pandemic, emphasizes the importance of conducting research in antiviral therapy. There is a constant threat of emerging and re-emerging viral pathogens that ultimately might have the potential to cause pandemics in a manner comparable to SARS-CoV-2. Hence, even though there is hope for an effective vaccine against SARS-CoV-2, the development of broadly acting antivirals is a top priority to be prepared for potential novel viral pathogens. The Research Section Molecular Virology at the University Hospital Tübingen has several developmental projects aiming to establish novel broadly acting antivirals. Our purpose is to identify and target either conserved viral structural elements or host cell pathways that are exploited by viruses for replication.

Objectives: In previous work, we have identified several promising hit candidates that show broad antiviral activity against a range of different viruses within virus families or even across them. The goal of the research project is, in a highly collaborative effort, to determine the exact IC50s of the compounds to act on various human pathogenic viruses including DENV, HIV-1, SARS-CoV-2, and HCMV in relevant cell culture models. Your task will be to identify and validate target structures, investigate the compound mode of action, perform SAR-optimization, and carry out resistance as well as toxicity screenings.

Study organization: You will be embedded in a highly motivated team of Postdocs and PhD-students working in the field of antiviral research. We have on-site collaborations with pharmaceutical chemists, bioinformaticians for in silico modeling and systems biology, structural biologists, and clinicians. Furthermore, we collaborate with several industrial partners with the ultimate goal to advance compounds into a clinical development stage.

Your profile: You are a highly-motivated PhD-student/postdoctoral scientist thrilled to pursue a career in academia. You have a collaborative vision of science; you are communicative, self-organized, and reliable. You have a strong interest or scientific background in virology, structural biology, or related fields. Ideally, you have worked with BSL3 pathogens (for instance flaviviruses, coronaviruses, influenza, retroviruses) and you have experience in protein production, purification, and advanced biochemistry necessary for structural analyses. We consider these technical skills an asset, but not absolutely required.

Contact for inquiries and to send your application documents:

Prof. Dr. Michael Schindler, University Hospital Tübingen, Institute for Medical Virology, Research Section Molecular Virology, Germany; michael.schindler@med.uni-tuebingen.de

The positions are available immediately (from December 2020 on). Applications will be screened on a rolling basis until the positions are filled.

Visit our webpage:

