

CSC-Tübingen PhD Scholarship Program

2025 application round: prospective PhD positions at the University of Tübingen

Faculty: Medical Faculty

Institute / Section / Subject: Institute for Medical Virology and Epidemiology of Viral Diseases

Supervising Professor(s): Prof. Dr. Daniel Sauter

About the Supervisor(s): Research in the Sauter lab focuses on the interplay of innate immune

responses with different viral pathogens (e.g., retroviruses). The supervisor has a strong interest in elucidating the co-evolution of viruses with their host species, and the mechanisms that viruses have evolved to overcome or evade immune responses. More information on the supervisor and the host

lab can be found here.

Specification: "Maturation and function of endogenous retroviral envelope proteins"

Topic Description: About 8% of the human genome consists of endogenous retroviruses

(ERVs). These repetitive elements are remnants of once infectious retroviruses that have become fixed in our DNA. While human ERVs have lost their ability to form infectious viral particles, some of them still encode functional envelope proteins (e.g. Syncytin-1, Syncytin-2, HEMO). The proposed PhD project aims to characterize the expression pattern, proteolytic maturation and physiological function of HEMO. In an interdisciplinary approach, the PhD candidate will investigate the role of HEMO in pregnancy and its effects on producer and potential target cells. The project will shed light on the exaptation of retroviral proteins during

human evolution and their roles in health and disease.

Intended Degree: PhD Exp. Med. / Dr. rer. nat.; possible integration into 'The Interfaculty

Graduate School of Infection Biology and Microbiology (IGIM)'

Type of the PhD Study: Full-time (complete doctoral studies at the University of Tübingen)

Required Degrees and Qualifications:

Master degree in Biology, Biochemistry, Infection biology, Molecular

Medicine, Biotechnology, or related degrees; expertise in infection biology, immunobiology, mobile genetic elements and/or placenta research is a plus.

Language Requirements: Excellent oral and written communication skills in English are mandatory.

Notes: The project involves work with infectious viruses under biosafety level 2.