PhD student position in Virology II – Institute of Virology and Immunology (IVI)
Ref. No. 18-26

Our Research Group works on viral zoonoses and host – pathogen interactions in the respiratory epithelium (http://www.ivi.unibe.ch/research/virology/group_dijkman/projects/index_eng.html). Specifically, the research in our group is focused on characterizing: (i) the innate immune response in the respiratory epithelium, (ii) the influence viral genetic traits have on immune evasion, and (iii) important host determinants during respiratory virus infection in different species. To address these questions, we make use of a pseudo-stratified primary airway epithelial cell culture (AEC) system as a main model to investigate virus-host interactions in various host species.

The project: In 2011, a novel member of the Orthomyxoviridae family, Influenza D virus, was identified among a broad spectrum of livestock species, including cattle, a species that was previously never considered to be susceptible to influenza virus infection. The underlying determinants affecting the broad host tropism of Influenza D virus – and its zoonotic potential – remain elusive. Considering the zoonotic potential, interspecies transmission, and significant veterinary and public health risks posed by influenza viruses, further research on the host tropism and pathogenicity of Influenza D virus is critical. This Research Project is focused on performing a detailed molecular characterization of Influenza D virus in various host species (e.g. human, porcine and bovine). During the project, we will make use of state-of-the-art techniques such as, genome-wide screens using CRISPR-mediated control of activating (CRISPRa) and inhibiting (CRISPRi) host gene expression in conventional cell lines and our transgenic AEC system, to define critical determinants of species barriers during influenza virus infections.

The Institute of Virology and Immunology (IVI) is part of the Federal Food Safety and Veterinary Office (FSVO) and is embedded in the Department of Infectious Diseases and Pathobiology, Vetsuisse Faculty, University of Bern. The IVI is the Swiss reference laboratory for the diagnosis, surveillance and control of highly infectious animal diseases, and the Swiss reference center for rabies (Swiss Rabies Center), and offers high quality research, teaching, and services in virology and immunology in cooperation with the Vetsuisse Faculty Bern.

We are looking for a highly motivated student with a strong interest in virus – host interactions to join our group. Experience in molecular biology, virology and (primary) cell culture is an advantage. The position requires a degree in biology, biomedical sciences, biochemistry or a related field. Fluent spoken and written English are prerequisites for this position.

We offer a young and enthusiastic research group, an inspiring research environment, and state-of-the-art research facilities in the attractive working location of Bern. The remuneration is in accordance with the regulations of the Swiss National Science Foundation (SNF), and is for a period of 3 years. The PhD student will be enrolled in the Graduate School of Cellular and Biomedical Sciences (http://www.gcb.unibe.ch) at the University of Bern.

The position is available immediately or by agreement.

How to apply: Please send your application, which should include a motivation letter, CV, copies of diplomas and references (letters / contact information of three references) as a single file (Ref. Number 18-26) by email to: Ms. Barbara Gautschi (barbara.gautschi@vetsuisse.unibe.ch). For questions regarding the project please contact Prof. Dr. Ronald Dijkman (ronald.dijkman@vetsuisse.unibe.ch). Applications will be accepted until the vacancy is filled.