PhD Studentship to work on Japanese encephalitis virus (100%)

In the group of Professor Artur Summerfield at the Institute of Virology and Immunology (IVI), we are recruiting a PhD student on the IVI Campus in Mittelhäusern near Bern. The position is for three years starting August 2020.

Japanese encephalitis virus (JEV) represents the most important arthropod-borne virus associated with severe encephalitis in human and loss of disability-adjusted life years. It has been identified as a major and increasing threat for Europe and the Americas because of climate changes with introduction of new mosquitoes and increased travelling. The project that is funded by the SNF is based on our previous observations that in pigs the virus can be directly transmitted between animals in absence of mosquito vectors (Nature Communications; 10.1038/ncomms10832). Considering that pigs represent an important amplifying host in the ecology of JEV, the potential impact of JEV entering into a completely naïve population of pigs could be dramatic and potentially cause a disruption of the insect-vertebrate alternating host cycles. To address this question, the project will investigate virus adaptation in pigs and its impact on virus-host interactions in pigs as well as in mosquitoes. Changes in virus-host interactions will be related to the changes occurring in the viral quasispecies populations as well as molecular changes. The results of this project are not only of fundamental importance for JEV but will also be very informative for other Flaviviruses.

The project will utilize both an in vitro and in vivo approaches using virological and immunological techniques combined with next generation sequencing and advanced bioinformatics. Handling of the virus will be at biosafety level 3.

You have a master in life sciences, a medical or veterinary medicine degree, are science-driven and strongly interested in virus ecology and virus host interactions. The successful PhD student will join the Graduate School for Cellular and Biomedical Sciences at the University of Bern, and be part of a multidisciplinary team addressing the above topic.

To apply, send your complete CV including copies of diplomas, a motivation letter and references all, compiled to one pdf to Ms. Barbara Gautschi by email barbara.gautschi@vetsuisse.unibe.ch. Deadline May 31st, 2020.