

EDI-IVI, HIGH TECHNOLOGY LAB

(CH)

Research topics:	The Immunology and Virology Departments of EDI-IVI are internationally recognized for studies on basic porcine immunology, antimicrobial immune responses, viral pathogenesis as well as vaccine development. Our general aim is to understand the functioning of the immune system in pigs and other veterinary species. Our laboratory is focusing on phagocytes, particularly dendritic cells and macrophages. With the tools available, we are developing new vaccine adjuvants and vectors designed to induce specific types of immune responses in pigs to improve antibody and T cell responses, both systemically and at mucosal surfaces. In addition, our research aims to understand the mechanisms of how viruses induce disease and evade the host immune response with a focus on phagocyte-pathogen interaction.
Activities and services currently offered by the infrastructure/installation:	EDI-IVI is the research unit of the Swiss Food Safety and Veterinary Office and is dedicated to animal health, especially the diagnosis, surveillance and control of highly infectious epizootic diseases. In collaboration with the Vetsuisse Faculty of the University of Bern, the IVI is also responsible for research and teaching in the fields of virology and immunology with a focus on livestock viral diseases. The IVI possesses full equipped BSL3 laboratories and BSL3 animal facilities for experiments with large animals such as pigs and cattle. An ample collection of viruses causing epizootic and zoonotic infections are available.
Description of the access to be provided under VetBioNet TNA call:	Access to high-end molecular typing and immunological technologies. EDI-IVI can offer training and help with projects studying immune responses in pigs. We offer advice from scientists with over 20 years' experience in porcine cellular immunology, innate immunity, cytokine biology, dendritic cell and macrophage biology. The tools, protocols and instrumentation for immunological

	<p>studies will be made available (up to 8-color flow cytometry and cell sorting facility, RT-PCR, bioplex, RNA Seq, etc.). Also, the EDI-IVI can give access to many BSL3 viral pathogens for which we have reagents and protocols established for their propagation and detection.</p> <p>Number of accesses: 3 Duration of each access: 1 month</p>
Animal species/pathogens that can be worked on in this infrastructure/installation:	Pathogens: IAV, FDMV, CSFV, ASFV, BTV, LSDV, PPR, PRV, RVF, PRRSV, Rabies, Flaviviruses (JEV, WNV, KOKV, ROCV, WESSV) and Coronaviruses (PEDV, MERS-CoV, SARS-CoV).
Travel and subsistence costs:	Our Institute provides accommodation possibilities and a restaurant for morning and midday lunches. Reimbursement of costs will be done according to the EDI-IVI accounting rules.
Infrastructure/installation ethical rules:	The ethical rules of our Institute are based on the regulations of the local authorities of the Canton of Bern, Switzerland.