



IGMP

Institut für
Gewebemedizin
und Pathologie

PhD student in parasite immunopathology

Workplace: Institute of Tissue Medicine and Pathology (Medical Faculty) and Institute of Parasitology (Vetsuisse Faculty), University of Bern

Starting date: Mai/June 2023 (negotiable)

Application deadline: 15.03.2023

Background: A **PhD student position** is available to study the immunoregulatory mechanisms underpinning alveolar echinococcosis (AE), which is caused by *Echinococcus multilocularis* (small fox tapeworm) and which represents the highest ranking foodborne parasitic zoonosis in Europe.

AE is a neglected, but emerging liver disease of humans and other mammals. Current treatment of AE is limited, and the disease causes high medical, psychological and socio-economic burden. The parasite-modulated immune response induced upon *E. multilocularis* infection is coupled to disease outcome. However, parasite-specific factors responsible for host immunomodulation as well as pathophysiological mechanisms underlying AE are still elusive.

In this highly **collaborative and multidisciplinary project**, we will apply already established protocols and use an integrated approach based on mouse models and patient-derived samples to investigate the contribution of a specific inflammatory pathways to *E. multilocularis* infection and AE disease.

Technologies utilized in this project include immunological and molecular biology techniques, cell culture, parasitology, fluorescence microscopy, and histology. The project will provide multiple opportunities for collaborations and scientific exchange. The candidate will have access to state-of-the-art scientific equipment and core facilities.

Literature: Lundström-Stadelmann B. et al., FAWPAR 2019, doi: 10.1016/j.fawpar.2019.e00040.

The **Institute of Parasitology Bern** carries out research on parasitic diseases of domestic and farm animals, and of humans, and is involved in teaching and diagnostic services and consulting. In terms of research, we focus on the study of pathogenetic processes that occur during parasitic infections, as well as on the development of new therapeutic approaches. The main topics of interest are zoonotic helminthiasis (echinococcosis, fasciolosis), and abortion-causing protozoans (neosporosis, toxoplasmosis, tritrichomonosis). https://www.ipa.vetsuisse.unibe.ch/index_eng.html.

The **Institute of Tissue Medicine and Pathology** is an institution of the University of Bern with three major tasks: teaching, research and diagnostic service. The Institute provides an attractive research setting that enables cutting-edge basic research together with facilitated access to human specimens and clinical data. https://www.igmp.unibe.ch/index_eng.html

Requirements: We are looking for a strongly motivated, creative and talented candidate with a Master's Degree in life sciences, biomedical sciences, or in veterinary or human medicine (Bologna compatible). The ideal candidate should be curious, perseverant, have a solid background in immunology, cellular biology, biochemistry, and ideally be familiar with common immunology techniques including flow cytometry, as well as cell culture techniques. Basic knowledge in biostatistics and previous experience with murine models represent advantages but are not prerequisites. The candidate should be proactive, have good communication skills (in English and possibly German) and possess an aptitude to work in a team as well as independently. Only applicants with outstanding CVs and references can be considered for this position.



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**UNIVERSITÄT
BERN**

Medizinische Fakultät

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If your profile matches our requirements, we look forward to receiving your application. The single PDF file should be sent to christine.feller@unibe.ch and include: CV, copies of diplomas and transcripts, a brief statement of your specific qualification for this position and the names and telephone numbers of two references.

We offer: Our group offers a well-funded research project in a young and dynamic environment, with close collaboration within the well-established team and other members of the Institute of Tissue Medicine and Pathology and the Institute of Parasitology.

Bern, the capital of Switzerland, is located very close to the Swiss Alps and is well connected to many important European cities (Milan, Zurich, Paris, and Munich). PhD Students will be part of the Graduate School of Cellular and Biomedical Sciences (<http://www.gcb.unibe.ch>).

The salary will be according to the guidelines of the Swiss National Science Foundation: <http://www.snf.ch/en/funding/documents-downloads/Pages/default.aspx#Regulations> (see Annex 12).

Questions can be directly addressed to the group leaders Prof. B. Lundström-Stadelmann (britta.lundstroem@unibe.ch) or Prof. Philippe Krebs (philippe.krebs@unibe.ch). http://www.ipa.vet-suisse.unibe.ch/forschung/gruppe_lundstroem_stadelmann
https://www.igmp.unibe.ch/research/research_groups/group_krebs/index_eng.html

We look forward to your application!