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W A newly established interdisciplinary consortium between the Gut Microbiology Laboratory of the Institute for Infectious Diseases, University of Bern (leading house), the Environmental Microbiology Laboratory (EML) in the School of Architecture, Civil and Environmental Engineering, EPFL, the Laboratory of Metabolic Signaling of the Interfaculty Institute of Bioengineering, EPFL, and the Clostridia Research Group (CRG) in the School of Life Sciences at the University of Nottingham has been funded by the Swiss National Science Foundation under the “Sinergia – Interdisciplinary and Collaborative Breakthrough Research” program to investigate bile acid related host-microbiome interactions along the gut-liver axis. The Gut Microbiology Group and the leading house of interdisciplinary and highly integrated collaboration are seeking

## **2 PhD students or 1 Postdoc (100 %)**

To investigate the interactions between bile acid transforming microbiota and host immune system and metabolism.

We are looking for a highly motivated candidate with a proven record of outstanding university study and/or early-career achievements. The scope of the project is to understand the mechanisms through which intestinal bile transforming bacterial species and their metabolites influence host immune system, metabolism and the remaining microbiota. The work entails experimenting with germ-free and gnotobiotic, wild-type and genetically targeted animals combined with genetically engineered pathogenic and symbiotic gut bacteria and their analysis using immunological and DNA and RNA based Omics approaches. Ideal candidates have a keen interest or experience in the experimentation with or analysis of microbial consortia, immune system and host systems biology using multidimensional immunological and systems biology approaches (multi-color flow cytometry, transcriptomics, highly parallel targeted protein based assays, metabolomics, etc.), high-throughput RNA/transcriptome sequencing, microbiome metagenomics, and/or the biocomputational and multivariate statistical analysis of the associated big data sets. Excellent candidates with backgrounds in immunology, microbiology/microbiota, metagenomics, bioinformatics, systems biology and/or others may be selected for this position, and the details of the individual project can be further tailored to the individual skillset and interests. We expect dedication, scientific creativity and the ability and interest to work in an interdisciplinary and interactive team.

### **Requirements**

Prospective PhD candidates must have a recognized Master degree. Postdoc candidates can only be recruited within the first year following the date of their PhD degree award to be eligible for funding for the entire duration of the project (4 years; possible deviations from this requirement can be discussed). A good command of the English language (oral and written) will be required (main lab language is English).

### **We offer**

The Gut Microbiology Lab is leading house of this interdisciplinary SNF Sinergia project. We are part of the Institute for Infectious Diseases (IFIK) of the University of Bern. The IFIK includes one of the largest Microbiological Diagnostics Center of the Canton of Bern and has strong ties to clinical researchers at the Insel University Hospital. Our laboratory is well-connected nationally and internationally with researchers working on host-microbiota interactions, infection and immunology, giving PhD students ideal opportunities to build a professional network for their future careers.



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You will be working in an interactive and supportive team and profit from interdisciplinary internal and external collaborations. All lab members will have access to diverse opportunities for continued education and are strongly encouraged to attend international conferences and summer schools that help develop their skills and promote their work. This includes in particular numerous methodological and data analysis courses and workshops offered by the University of Bern and Swiss university network.

Swiss PhD and postdoc salaries are highly competitive internationally, and Switzerland and the Canton of Bern offer outstanding quality of life and social security to Swiss and foreign citizens alike. Our lab is exceptionally well supported by Institute staff tending to equipment maintenance, purchasing, cleaning, autoclaving, etc., so that our scientists can focus on their scientific work. Finally, Bern and the beautiful surrounding regions offer countless ways to enjoy your free time.

### **Contact**

Information about the application

Possible starting date is 1. September 2018 or later.

To apply, send a single pdf file including a letter of motivation and summary specific research interests and their relation to the project, a complete CV and the reference letters or names and contact details of at least two references to [siegfried.hapfelmeier@ifik.unibe.ch](mailto:siegfried.hapfelmeier@ifik.unibe.ch). Application deadline for this call is 15. August 2018. Initial interviews will be conducted via Skype or telephone. Preselected applicants may be invited to a recruitment seminar.

Contact for further queries: Prof. Siegfried Hapfelmeier, E-Mail: [siegfried.hapfelmeier@ifik.unibe.ch](mailto:siegfried.hapfelmeier@ifik.unibe.ch)

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