

Postdoc position: Intestinal microbiota and lifelong immunity
(full-time)



b
**UNIVERSITÄT
BERN**

We are recruiting a postdoctoral fellow to study the immune-microbial relationship early in life and consequences of their perturbation on lifelong host health.

Switzerland

Project:

The symbiotic microorganisms colonize all mucosal body surfaces of newborns and play a key role in shaping the development and maturation of immune system. In the intestine, the first vigorous immune response to colonizing bacteria after birth occurs at weaning. This response termed "weaning reaction" is critical for generating an immune memory that dictate the tolerance or the susceptibility to multiple inflammatory pathologies later in life (Al Nabhani *et al.*, *Immunity* 2019, *Nature Metabolism* 2019). In the framework of ERC starting project, we are seeking to gain knowledge regarding the immunological and microbiological mechanisms behind the weaning reaction. We aim to assess the dietary and microbial components that influence immune memory generation and impact the susceptibility to develop both metabolic disorders and immune-mediated diseases. The successful candidate will work on the project using different transgenic germ-free and gnotobiotics mouse models and acquiring variety of techniques including flow cytometry, scRNAseq, mass spectrometry and shotgun metagenomic sequencing.

The post-holder will be supported by a well-funded interdisciplinary research program in a young and dynamic environment at the Department for BioMedical Research (DBMR), University of Bern, and at the Hospital University of Bern (Inselspital), Switzerland. We work closely with groups of Prof. Andrew Macpherson and Prof. Stephanie Ganal-Vonarburg, and we are involved in joint lab meetings and journal clubs. We are now developing an international collaborative network in which the postdoc will be involved.

Candidate qualification:

The applicant must have a doctorate (PhD) degree obtained after January 2019 or will defend his/her PhD within the next six months. The candidate should have a strong interest in mucosal immunology and microbiota and must be highly experienced in working with mouse models and multicolor flow cytometry. Expertise in epigenetic, molecular biology, or analysis of microbiome datasets are advantages. Demonstrated competence to independently conduct experiments and analyses, and willingness to collaborate internally and externally are mandatory. The applicant needs to have at least one first author publication in a peer reviewed journal.

Our offers:

We provide excellent scientific opportunities in a highly motivating environment with a multidisciplinary approach to immunology and microbiology discussions as well as seminars with wide-range topics. The project offers a special opportunity to be trained on experimental mucosal immunology using germ-free and gnotobiotic mouse models. We offer close supervision with ample support and encourage the postdoc participation in international research conferences and courses. We assist postdoc for an independent global scientific career through and after the project.

Starting date: December 2021 or on agreement

Duration: 3 years

Salary: according to the University of Bern guidelines

Application contact:

Please send your application including a short letter of interest, curriculum vitae with description of your professional experience, a list of publications, a list of 2 contact referees or their references letter as a single pdf-file by email to:

Prof. Ziad Al Nabhani: ziad.alnabhani@dbmr.unibe.ch

Applications will be considered on an on-going basis. A first contact is usually established through an informal Skype/Zoom interview (~15 minutes).