

The Institute of Medical Microbiology and the Institute of Molecular Medicine are offering

## 2 PhD positions in Microbe-Host Interactions, (1 position in Laboratory Animal Science/Microbiology and 1 position in Molecular Immunology/Bioinformatics)

in the context of a collaborative research project financed by the German Research Foundation (DFG), which focuses on the "Functional analysis of gut microbiome-host interactions during the postnatal window of opportunity by a multiscale sequencing approach". The positions are project-related and offered for 3 years each. The salary corresponds to level EG 13 TV-L. The successful candidates have the opportunity to pursue a doctoral degree.

### The project

The gut microbiome plays a fundamental role in health and disease. This inter-disciplinary project aims at elucidating the important role of colonization processes in early life on microbial community establishment and the maturation of mucosal immune cells in gnotobiotic mouse models.

### Job description

The two PhD positions will work on individually defined projects but act as tandem, creating maximal synergies that will help performing the work most efficiently. The project is based on targeted colonization studies in germfree mice followed by high-throughput sequence analyses of microbial and immune cell compartments. The work includes the isolation and characterization of anaerobic gut bacteria and corresponding phages for targeted manipulation of communities in vivo as well as lymphocyte receptor sequencing and single-cell (sc) transcriptomics for measurement of intestinal epithelial cell maturation.

### Your profile

You hold a Master degree (or equivalent) in Science. For position 1, you specialized in either (i) Microbiology and have a strong interest in developing skills in gnotobiology, or (ii) in Animal Science and you are keen in gathering experience in Microbiology. For position 2, you specialized in either (i) Bioinformatics and have a strong affinity for immunology-related scientific questions, or (ii) in immunology and you have already programming skills that you wish to further develop.

You are open-minded, enjoy working with peers, and pro-active (i.e. inclined to make decision on your own whilst seeking all possible sources of information). Good command of the English language (oral and written) is expected. German language is a big plus for the position in Microbiology/Animal Science. Throughout the years, you are expected to increasingly take responsibility for your project and develop proficiency in scientific writing and communications.

### Our offer

A very dynamic and interdisciplinary environment with state-of-the-art laboratory and equipment. Please visit our respective institute website for more detailed information on our research and all four PIs involved in the project: Prof. Thomas Clavel, Prof. Hans-Peter Horz, Prof. Mathias Hornef, and Prof. Oliver Pabst.

Enrollment in the BioMedical Graduate School Aachen ([www.medizin.rwth-aachen.de/bmgs](http://www.medizin.rwth-aachen.de/bmgs)) provides a qualification program for PhD students with networking activities, annual retreats, and structured supervision concept.

The RWTH Aachen University is certified as a family-friendly university and offers a dual career program for partner hiring. We particularly welcome and encourage applications from women, disabled people and ethnic minority groups, recognizing they are underrepresented across RWTH Aachen University. The principles of fair and open competition apply and appointments will be made on merit.

### Contact persons

For position 1 in Microbiology/Animal Science: Univ.-Prof. Dr. rer. nat. Thomas Clavel, Functional Microbiome Research Group, Institute of Medical Microbiology, University Hospital RWTH Aachen, Pauwelsstraße 30, 52074 Aachen, Germany; E-Mail: [tclavel@ukaachen.de](mailto:tclavel@ukaachen.de)

For position 2 in Bioinformatics/Molecular Immunology: Univ.-Prof. Dr. rer. nat. Oliver Pabst, Institute of Molecular Medicine, University Hospital RWTH Aachen, Pauwelsstraße 30, 52074 Aachen, Germany; E-Mail: [opabst@ukaachen.de](mailto:opabst@ukaachen.de)

### Application

Please send one pdf file (labelled YOUR-NAME\_DFGngs\_AC\_position-1 or \_position-2) to the respective contact person until **07.07.2019**, including: motivation letter, curriculum vitae, copies of academic degrees and transcripts of marks, contact information of at least two referees, list of publications with electronic link for online visualization or downloading (do not include your publications in the pdf file).