

The Institute of Medical Microbiology at the RWTH University Hospital is recruiting a **PhD student** (m/w/d) for studies in infection biology/mucosal immunology.

The Hornef lab focuses on the host-microbial interaction at the intestinal mucosa with particular emphasis on the postnatal and infant period. This includes the identification of age-dependent differences of the innate and adaptive immune system and the characterization of their influence on bacterial colonization, the establishment of the enteric microbiota as well as the susceptibility to infection with bacterial, parasitic and viral pathogens. We ultimately aim at a better understanding of the impact of postnatal bacterial colonization and enteric infection on life-long health and disease. Please find more information on our homepage under <https://www.ukaachen.de/kliniken-institute/institut-fuer-medizinische-mikrobiologie/institut.html>.

Using our established neonatal murine infection model, we are analyzing the contribution of both effector molecules of *Salmonella enterica* subsp. *enterica* sv. Typhimurium and the host during the host-microbial interplay *in vivo* (Zhang et al., PLoS Pathogens, 2014; Zhang et al., PLoS Pathogens, 2018). The PhD project will analyze the role of selected bacterial and host factors responsible for epithelial cell death and tissue damage during infection using our established *in vivo* model as well as stem cell organoids.

As a PhD student at the RWTH University Hospital you will be a member of a vibrant and international mucosal immunology community and part of the Biomedical Graduate School Aachen (www.medizin.rwth-aachen.de/bmgs). You will have access to all infrastructure needed for your research such as high-end FACS equipment, cell sorters, and fluorescence microscopes as well as facilities at biosafety level 2.

The ideal candidate would

- have a Master's degree or equivalent in biology, biochemistry, microbiology or related.
- have a strong interest in mucosal immunology, microbial pathogenesis and infection biology.
- have lab experience in the field of immunology and/or infection biology (experience with animal models/FELASA B is advantageous but not mandatory).
- be proficient in spoken and written English and motivated to work independently in an interdisciplinary team.

The position is available from November 1st 2019 and initially funded for three years at a salary level of 50% of 13 TV-L in the first year and 65% in the following years. The candidate will have the opportunity to pursue a doctoral degree

Aachen is a history rich town located at the border between Germany, Belgium, and the Netherlands. With 45000 students and 9000 employees the RWTH Aachen significantly shapes the landscape and atmosphere of Aachen. RWTH Aachen University is certified as a Family-Friendly University. We particularly welcome and encourage applications from women, disabled persons 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.

Please send your application (CV, copies of your university degrees with detailed marks and certificates, the names and contact information of at least 2 referees as well as a cover & motivation letter) to Mrs Maike Schleibach (mschleibach@ukaachen.de or Institut für Medizinische Mikrobiologie, Uniklinik RWTH Aachen, Pauwelsstraße 30, 2074 Aachen, Germany) before May 31st 2019.

For more information on the research project, please contact Prof. Mathias Hornef (mhornef@ukaachen.de) or Dr. Kaiyi Zhang (kzhang@ukaachen.de).