



June, 2017

The Division of Microbiology at the University Osnabrück opens a position on:

Intracellular lifestyle of *Salmonella enterica*

Applications are invited for a project investigating the interaction of *Salmonella enterica* with mammalian host cells with focus on adhesion to polarized epithelial cells. A position as PhD student or as post-doctoral coworker (pay scale E13 TV-L, 50-100%) is immediately available for an initial period of 2 years. An extension is anticipated.

Our group is interested in understanding the molecular and cellular basis of bacterial pathogenesis. Of particular interest are the virulence functions of *Salmonella enterica* required for survival and replication within the *Salmonella*-containing vacuole (SCV) in host cells. We investigate the environmental signals sensed and responded to by *S. enterica* in the SCV, and specific defense mechanisms activated by *Salmonella*. The project involves analyses of the proteome of *Salmonella* in the SCV, as well as of proteomes of the SCV. We have recently identified a group of host cell proteins that are required for intracellular pathogenesis of *Salmonella*. The project should lead to a detailed molecular and functional characterization of these host proteins in *Salmonella* pathogenesis. The project will also include analyses of human-specific *S. enterica* serovars Typhi and Paratyphi A. For further information, see:

Liss, V., and Hensel, M. (2015). Take the tube: remodelling of the endosomal system by intracellular *Salmonella enterica*. *Cell Microbiol* 17, 639-647.

Liss, V., et al. (2017). *Salmonella enterica* remodels the host cell endosomal system for efficient intravacuolar nutrition. *Cell Host Microbe* 21, 390-402.

Applications are invited from postgraduates with excellent degrees in biology, biochemistry, molecular medicine, or related disciplines. Candidates should have sound working experience with standard and advanced cell biology techniques and a strong background in microbiology and imaging techniques will be of advantage.

The Division of Microbiology operates several light microscopy systems providing wide-field, CLSM, spinning disk, TIRF, FRAP techniques with live cell environment, and micromanipulation under S2/BL2 conditions. Further microscopy techniques such as super-resolution microscopy, TEM and AFM are locally available within the framework of DFG collaborative research center SFB 944, institutional infrastructure of the research center 'CellNanOs' and intramural collaborations.

The University Osnabrück offers structured study programs for postgraduate candidates, such as the integrated graduate school of SFB 944 'Physiology and dynamics of cellular microcompartments'.

Applications should include CV, academic degrees, description of previous research projects, and addresses of at least two referees. Applications and inquiries should be submitted by E-mail to:

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