

June, 2017

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

Adhesive mechanisms of *Salmonella enterica*

Applications on 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 the adhesion to, and invasion of polarized cells. We investigate the structure-function relationship of the giant non-fimbrial adhesin SiiE of *S. enterica*, the cognate type I secretion system for SiiE, and the mechanisms of controlled secretion and surface retention of SiiE. Our analyses utilize techniques of advanced bacterial genetics, infection models with polarized cells, ultrastructural analyses, and protein structure analyses. For further information, see:

Wille, T., *et al.* (2014). SiiA and SiiB are novel type I secretion system subunits controlling SPI4-mediated adhesion of *Salmonella enterica*. *Cell Microbiol* 16, 161-178.

Peters, B., *et al.* (2017). Structural and functional dissection reveals distinct roles of Ca²⁺-binding sites in the giant adhesin SiiE of *Salmonella enterica*. *PLoS Pathog* 13, e1006418.

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 biochemical 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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