



PhD studentship

Virus-Immunology

The **Heinrich Pette Institute** – Leibniz-Institute for Experimental Virology (HPI), is committed to research on the biology of different human viruses as well as the pathogenesis of viral diseases. The HPI offers the opportunity to perform cutting-edge research in a world-class research environment with excellent technical facilities.

We are looking for highly motivated candidates with a strong interest in immunology.

The ongoing obesity epidemic has severe repercussions for human health. Obesity is associated with enhanced susceptibility to infections and tissue inflammation. Dysregulated cellular metabolism is understood to disrupt immune cell functioning and impair host-defense responses upon viral infections, the exact mechanisms however resulting in altered metabolic immune cell functioning are unclear. Emerging data suggests that the crosstalk between parenchymal and immune cells is dysregulated in obese patients. Calcium (Ca²⁺) signalling upon T cell activation is critical for shaping T cell responses and alterations in the signalling cascade due to environmental cues from obesity affected intestinal cells may underlie the impaired T cell responses in obese patients. We have developed in vitro organoid system models based on primary human cells to mimic CD4⁺ T cell-parenchymal cell interactions in tissue organoids from obese patients. In this project, we will determine the impact of obesity on human CD4⁺ T cell-ISC crosstalk using the joined department's expertise's on Ca²⁺ live-cell-imaging in T cells, and organoid technology.

We offer a PhD position for three years in the Research Department "Virus Immunology" / '**Immune Ontogeny**' and the Department of Biochemistry and Molecular Cell Biology at the UKE (Dr. Björn Diercks). Payment and social benefits are in accordance with regulations of the German TV-AVH (salary agreement public service employees).

For questions, please contact Dr. Madeleine Bunders (Email: madeleine.bunders@leibniz-hpi.de).

Applications should include a CV, a short description of previous experiences and technical skills, and two or three references. Please submit your application by March 31, 2020. Late applications will be considered until the position is filled.

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