

## PhD Student (f/m/d)

### Graduate School “*Infection*” of the Leibniz Center Infection

#### Project title: “Determinants of human cytomegalovirus virulence in neutrophils and macrophages”

The Leibniz Center Infection (LCI) is a strategic alliance of the North German Leibniz Institutes Bernhard Nocht Institute for Tropical Medicine (BNITM), Research Center Borstel – Leibniz Lung Center (FZB) and Heinrich Pette Institute, Leibniz Institute for Experimental Virology (HPI). The LCI focuses on global infections and links the complementary research of the three Leibniz institutes: tropical and emerging infections at BNITM, bacterial infections of the lung at FZB and viral diseases at HPI ([www.lc-infection.com](http://www.lc-infection.com)). The alliance provides a three-year structured graduate program on “*Infection*”.

The **Heinrich Pette Institute** focuses on human pathogenic viruses with the aim of understanding viral diseases and developing novel therapeutic approaches ([www.hpi-hamburg.de](http://www.hpi-hamburg.de)). The HPI offers one doctoral position in collaboration with Dr. Tobias Dallenga (FZB):

*“Determinants of human cytomegalovirus virulence in neutrophils and macrophages”;*

Main Supervisor: **Dr. Giada Frascaroli** (HPI Research Department “Virus-Host Interaction”).

#### *Description of the project:*

Macrophages (M $\phi$ ) and neutrophils are key innate immune cells driving early host responses to infections. While neutrophils attack the invading microbes via phagocytosis and intracellular degradation, M $\phi$  regulate neutrophil responses and afterward remove the exhausted cells. For an immune response to be effective, neutrophils and M $\phi$  must work in concert and in a tightly regulated fashion. The success of *Mycobacterium tuberculosis* (Mtb) and human cytomegalovirus (HCMV), two important and ubiquitous human pathogens, rests upon their ability to sabotage these cells, deregulating their phagocytic capacity, viability and inflammatory functions. By combining state of the art immunology, virology and imaging techniques, we want to investigate how HCMV establishes infection in these immune cells and how it alters neutrophils and M $\phi$  crosstalk. Additionally, since there is a remarkable high level of genetic variability between circulating HCMV viruses, we want to analyse HCMV viruses with different levels of virulence and identify the underlying genetic determinants.

The Heinrich Pette Institute promotes the professional equality between women and men. Therefore, especially women are encouraged to apply. Handicapped applicants will be preferred in otherwise similar qualification, competence and professional performance.

Starting date will be summer 2020 or later. Salary will be according to German TV-AVH (salary agreement for public service employees). The application should include a letter of motivation, CV, two letters of recommendation and a summary of the master/diploma thesis. Documents should be sent **by June 15, 2020** exclusively by email as single pdf-file (not exceeding 5 MB). Please note that only shortlisted candidates will be informed.

For project related questions, please contact: [giada.frascaroli@leibniz-hpi.de](mailto:giada.frascaroli@leibniz-hpi.de)

Please send applications to: [personalabteilung@leibniz-hpi.de](mailto:personalabteilung@leibniz-hpi.de).