
Job Advertisement HKI-26/2021

The **Leibniz Institute for Natural Product Research and Infection Biology – Hans Knöll Institute** (Leibniz-HKI, www.leibniz-hki.de) investigates the pathobiology of human-pathogenic fungi and identifies targets for the development of novel natural product-based antibiotics. Talented and highly qualified candidates are invited to apply for a position in a **Junior Research Group** of **Dr. Mark S. Gresnigt** as a

Doctoral Researcher (f/div/m) in fungal pathogenicity mechanisms

for three years initially.

Research Areas: Microbiology, Mycology, Immunology

This project is part of the DFG-funded Collaborative Research Center Transregio FungiNet within the **C1 project**.

Project background:

Invasive candidiasis is one of the most common nosocomial fungal infections threatening patients in intensive care units, immunocompromised patients with dysfunctional gastrointestinal (GI) epithelial barriers. Most individuals carry *Candida* species as commensals in their GI tract and the evidence is overwhelming that this is a major source of *C. albicans* causing systemic candidiasis. Therefore, elucidating mechanisms of intestinal colonization, infection and translocation can provide crucial insights into disease pathogenesis.

The immune system normally would efficiently clear translocated *C. albicans*. However, many patients suffer from impaired immune function due to underlying disease, severe inflammation, or immunosuppressive therapy, predisposing them to develop candidiasis. Therefore, immunotherapy is considered a promising approach to improve outcome of infection. While interferon (IFN) γ can augment candidacidal activity of macrophages, in the context of the intestinal epithelium this cytokine can compromise epithelial barrier function. The project will evaluate potential detrimental or beneficial effects of IFN γ on *C. albicans* colonization, infection, and translocation.

Candidate´s profile:

We expect a master´s degree (or equivalent) in life sciences (e.g. biology, biochemistry, or microbiology). Furthermore, the applicant should be able to perform team-oriented as well as independent work. Experimental background in one or more of the following subjects is beneficial: immunology, microbiology, infection biology. Practical experience in cell culture, fluorescence microscopy, or mucosal immunology is an advantage. Very good communication skills in English are compulsory.

We offer:

The successful candidate will be hosted in the **Junior Research Group** of **Dr. Mark S. Gresnigt**. The Leibniz-HKI is embedded in the outstanding scientific environment of the Beutenberg Campus providing a state-of-the-art research environment and a highly integrative network of life science groups. We offer a multifaceted scientific project with excellent technical facilities, a place in a young, committed team, as well as strong scientific collaborations. The PhD candidate will participate in the structured program of the **International Leibniz Research School** and become an associated member of the **Jena School of Microbial Communication**.

Salary is paid according to German TV-L (salary agreement for public service employees). As an equal opportunity employer, the Leibniz-HKI is committed to increasing the percentage of female scientists and therefore especially encourages them to apply.

Further information:

Dr. Mark S. Gresnigt | +49 3641 532 1305 | career@leibniz-hki.de

Applications:

Complete applications in English, including a cover letter with a brief statement of research experiences, a CV with a complete list of publications, and the addresses of two possible referees, should be submitted by **July 25, 2021** via the Leibniz-HKI **online application system**.

