

The **Leibniz Institute for Natural Product Research and Infection Biology – Hans Knöll Institute** (Leibniz-HKI, [www.leibniz-hki.de](http://www.leibniz-hki.de)) investigates the pathobiology of human-pathogenic fungi and identifies targets for the development of novel natural product-based antibiotics. The junior research group **Adaptive Pathogenicity Strategies** invites talented and highly gifted candidates to apply as a

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

for three years initially.

### Research Area:

Fungi infect billions of people annually and kill as many people as tuberculosis or malaria. 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) $\gamma$  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 $\gamma$  on *C. albicans* colonization, infection, and translocation. More details can be found [here](#).

### Candidate's profile:

- Master degree in biology, biochemistry, microbiology or a related discipline
- Strong interest in infection biology and immunology
- Educational background in one or more of the following subjects: microbiology, infection biology, immunology, cell biology
- Practical experience in cell culture, fungal molecular biology and fluorescence microscopy is an advantage
- Ability to perform team-oriented as well as independent work
- Very good communication skills in English are necessary

# Job Advertisement

## Leibniz-HKI-25/2022



Leibniz Institute  
for Natural Product Research  
and Infection Biology  
Hans Knöll Institute

### We offer:

- An interdisciplinary scientific project hosted by the junior research group Adaptive Pathogenicity Strategies
- A place in a young, friendly, international and committed team, with strong local, national and international scientific collaborations
- A PhD project embedded in the Deutsche Forschungsgemeinschaft (DFG)-funded Collaborative Research Center Transregio FungiNet within the **C1 project**
- Participation in the structured program of the Jena graduate school **International Leibniz Research School** or the **Jena School for Microbial Communication**
- Joining the Leibniz-HKI which is renowned for its research in infection biology and natural products and embedded in the outstanding scientific environment Beutenberg Campus, providing state-of-the-art research facilities and a highly integrative network of life science groups

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 increase 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](mailto:career@leibniz-hki.de)

### Applications:

Complete applications in English should include a cover letter, a CV containing a complete list of publications, a brief statement of research experiences, a certificate of study/transcript of records, the addresses of two possible referees, and should be submitted via the Leibniz-HKI **online application system**. The deadline for the advertisement is **June 17, 2022**, but applications will be reviewed on a rolling basis.