

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. The department of **Microbial Pathogenicity Mechanisms** invites talented and highly gifted students to apply for a position as

Master student (f/div/m)

Topic: Pathogenicity mechanisms of human pathogenic yeasts

Human pathogenic fungi frequently cause infections of skin and mucosa, however, they are also capable of causing life threatening mycoses. The department of Microbial Pathogenicity Mechanisms investigate infections caused by human pathogenic fungi. Research is focused on the pathogenesis of mycoses due to yeasts such as *Candida albicans* or *C. glabrata*. In contrast to most other human pathogenic fungi, *Candida* species are part of the normal human microbial flora. However, if the natural barrier of the host is breached, or if the immune system is weakened, *Candida* is able to cause infections. In these cases, the fungus can overgrow the microbial flora and may enter deeper tissue layers or even organs. We aim to find the factors involved in the ability of fungi to cause diseases and to elucidate the host response to fungal infections. Furthermore, we investigate the commensal stage of human-associated *Candida* species. To this end, we apply methods of cellular and molecular biology, microbiology, immunology and biochemistry with *C. albicans* and *C. glabrata* as model organisms. By this means, we want to learn more about the pathogenicity factors of this fungus and possibly find novel targets for future antifungal drugs.

We offer:

Project modules, Specialization modules and Master's thesis projects for MSc Biochemistry and MSc Microbiology (and related degree programs) students dealing with the following (or related) topics: "Interaction of *Candida* species with macrophages: host cell death, persistence, and escape" and "Evolution and adaptation of *C. albicans* to host dietary sugars". Each project will deal with an aspect of the topic "Pathogenicity mechanisms/immunology of human pathogenic yeasts" and will be supervised by a PhD student or a postdoc. Applicants should be interested in microbial infection biology and should have good knowledge in microbiology, molecular biology, immunology and/or biochemistry (preferred students studying M.Sc. Biochemistry and M. Sc. Microbiology). Beside good knowledge and skills we expect excellent abilities to work in a team. The work will be done in a very well equipped S2 laboratory. The projects can start autumn this year.

As an equal opportunity employer, the Leibniz-HKI is committed to increase the percentage of female scientists and therefore especially encourages them to apply.

Job Advertisement

Leibniz-HKI-24/2022



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

Further information:

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Applications:

Please apply by sending your application with CV and certificate of study/transcript of records, 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.