

## Job Advertisement No. 01/2012

The Leibniz Institute for Natural Product Research and Infection Biology – Hans Knöll Institute – (HKI, [www.hki-jena.de](http://www.hki-jena.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 (MPM) offers a

# PhD student position

for three years initially.

### **Project: Micronutrient acquisition during fungal infections**

*Candida albicans* and *C. glabrata* are two of the most important fungal pathogens of humans. They normally exist as harmless commensals on mucosal surfaces, for example in the gut of a healthy host. Only under certain predisposing conditions, they can become pathogenic, leading to severe superficial or even life-threatening systemic diseases. The processes which trigger the transition from the commensal stage to infection are not clear. However, it is known that the normal microbial flora and the host defence are normally sufficient to keep the fungus in its commensal stage. The host employs a whole armamentarium of antifungal activities: in addition to the innate and adaptive parts of the immune system, the host is able to severely restrict the availability and accessibility of nutrients in a process called 'nutritional immunity'. First and foremost, the pathogen's access to micronutrients like iron or zinc is shut off.

As successful pathogens, *C. albicans* and *C. glabrata* must have ways to circumvent this host defense mechanism and acquire micronutrients *in vivo*. This project will help to elucidate the strategies by which the fungi are able to acquire these micronutrients during infection, using molecular, cellular and systems biology approaches

We expect a Master's degree (or equivalent) in Natural or Life Sciences. Furthermore, the applicant should be able to perform team-oriented as well as independent work. Practical experiences in one or more of the following subjects are beneficial: Microbiology, Molecular Biology, Infection Biology, Cellular Biology.

We offer a multifaceted scientific project with efficient supervision by a team of supervisors, a comprehensive mentoring program, excellent technical facilities, a place in a young, committed team, as well as strong scientific collaborations. Salary is paid according to German TV-L (salary agreement for public service employees). The HKI is an equal opportunity employer.

Further information:

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Complete applications in German or English should include a CV, list of publications, brief statement of research experiences, a list of three potential references, and should be submitted **until 31.03.2012** referring to **HKI job posting No. 01/2012** to [jobs@hki-jena.de](mailto:jobs@hki-jena.de)

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