Leibniz-Institut für Naturstoff-Forschung
und Infektionsbiologie
Hans-Knöll-Institut

Job Advertisement No. 04/2015

The Leibniz Institute for Natural Product Research and Infection Biology – Hans Knöll Institute – (HKI, 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** invites applications for

1 PhD position

in the field of Microbiology / Infection Biology / Cellular Microbiology. The project will be associated to the research project "FunComPath - From colonization to infection: dissection of the commensal-to-pathogen shift of *Candida albicans*" within the European Infect ERA Program (www.infect-era.eu/).

Project background
Fungi infect billions of people annually, kill as many people as tuberculosis or malaria and are a major problem in the clinical setting. The yeast *Candida albicans* is a commensal of the majority of humans, but also the most common fungal cause of life-threatening nosocomial bloodstream infections. Pathogenesis of C. albicans infections is linked to the expression of fungal virulence attributes and insufficient or inadequate host responses. However, the microbiota also plays a key protective role on mucosal surfaces, and antibiotic therapy is a major risk factor for life-threatening *C. albicans* infections. In fact, removal of protective bacteria is a prerequisite for the induction of experimental translocation of *C. albicans* from the gut into the blood stream and the human gut is the major reservoir of *C. albicans* for systemic infections.

In this project, we will investigate the molecular mechanisms of the shift of the fungus *C. albicans* from commensalism to pathogenicity (FunComPath) and the protective role of probiotic bacteria and yeasts.

The successful candidate will work on the FunComPath project. This research is conducted using microbiology, post-genomics, molecular and cellular approaches in different contexts that are relevant to the interaction of *C. albicans* with bacteria and the host.

Candidate's profile
We expect a Master´s degree (or equivalent) in Life Sciences (e.g. Biology, Biochemistry, Microbiology). 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. Practical experience in cell culture, microarrays or fungal genetics is an advantage.

What we offer
The successful candidates will be hosted at the Department of Microbial Pathogenicity Mechanisms (MPM) (Prof. Bernhard Hube) at the HKI. The department is embedded in the outstanding scientific environment of the Beutenberg Campus providing state-of-art research facilities 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.

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 two potential references, and should be submitted **by 15.03.2015** referring to **HKI job posting No. 04/2015** to **jobs@hki-jena.de**

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