



## International Leibniz Research School

### For Microbial and Biomolecular Interactions

The Leibniz Institute for Natural Product Research and Infection Biology - Hans Knoell Institute - in cooperation with the Friedrich-Schiller-University and the Max Planck Institute for Chemical Ecology are offering an international graduate program. The

#### International Leibniz Research School (ILRS Jena)

gives PhD students the possibility to prepare for their PhD exam in an ambitious program providing excellent research conditions.

We invite applications for a

### PhD Student Position (Ref.No.35/2008)

#### Transcriptional profiling and characterisation of *Candida albicans* infection-associated genes during host-pathogen interactions

The opportunistic human fungal pathogen *Candida albicans* causes a wide range of diseases from superficial to life-threatening infections, especially in individuals with an impaired immune system. Transcriptional profiling of *C. albicans* during interaction with host cells and tissue in various models of infection (blood-stream, oral infection and liver invasion) has revealed a large number of fungal genes specifically expressed during these processes. However, many of these genes encode for proteins with unknown function.

In this project, the transcriptional profile of *C. albicans* during interaction with host cells will be extended to other tissues, such as enterocytes or endothelial cells, both from cell culture and *in vivo* samples. Unknown function genes, in particular those which are unique for pathogenic fungi, will be selected and disrupted to produce knockout mutants. The obtained deletion mutants, the gene and the gene product will then be analysed using existing infection models and a combination of computer-based, histological, microscopic, cellular, biochemical, transcriptional and molecular approaches.

The aim of this approach is the identification and characterisation of fungal molecules involved in interactions with the host during infection and disease.

#### We expect:

- a Master's degree (or equivalent) in Natural or Life Sciences. Research at ILRS is centred around "Microbial and biomolecular interactions". Candidates about to earn their degree are welcome to apply.
- high motivation and interest to join one of the research areas of ILRS
- an integrative and cooperative personality
- very good communication skills in English

**We offer:**

- a top-level research environment
- efficient supervision by a team of two supervisors
- a comprehensive mentoring program (cf. Program of Study)
- courses in novel technologies and soft skills
- a highly communicative atmosphere between the involved institutions
- Jena – the **German City of Science 2008**: a young and lively city with dynamic business activities, successful scientific centres of innovation and a vibrant cultural scene around the famous Friedrich Schiller University

The positions are available starting in January 2009 and for three years. Salary will be according to TV-L (salary agreement for public service employees).

HKI is an equal opportunity employer.

Further information:

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For the first step of the application procedure please acquaint yourself with the scientific projects offered on our website

[www.ilrs.hki-jena.de](http://www.ilrs.hki-jena.de)

and thoroughly fill in the “Statement of Interest” form downloadable from this site. The application procedure is handled online exclusively via the ILRS website. Applications can only be considered upon receipt of the completed “Statement of Interest” form submitted to

[ilrs@hki-jena.de](mailto:ilrs@hki-jena.de) .

**Deadline for submission of the ‘Statement of Interest’: October 30<sup>th</sup>, 2008.**

Successful applicants will be invited to attend a recruitment meeting in December 2008.