



International Leibniz Research School

For Microbial and Biomolecular Interactions

Interactions

The [Leibniz Institute for Natural Product Research and Infection Biology – Hans Knöll Institute](#) – in cooperation with the Friedrich Schiller University, the University Hospital Jena and the Max Planck Institute for Chemical Ecology are offering an international graduate training programme. The

International Leibniz Research School (ILRS Jena)

gives doctoral researchers the possibility to prepare for their PhD exam in an ambitious program providing excellent research conditions. The ILRS is part of the “[Jena School for Microbial Communication](#)” (JSMC) which is the early career program of the Cluster of Excellence “[Balance of the Microverse](#)”.

We invite applications for a

Doctoral Researcher Position (Ref.No. ILRS_02/2019)

The role of complement factor H related proteins in fungal infection

The factor H-related proteins are members of the factor H protein family. They circulate in human blood and bind to microbes like *Candida albicans*. However, the physiological role of most of these proteins is still elusive. To find out whether a pathogenic microbe recruits these proteins by purpose to the cell surface or whether this is an immune response by the host to the infection is unclear. In order to answer this question, the human pathogenic fungus *C. albicans* will serve as model system and we will investigate in detail, which function attached FHR proteins mediate on the surface. For this reason, different methods will be applied including incubation of *C. albicans* in different serum probes, determining the activation pattern on the surface of *C. albicans*, performing RNAseq to identify the induction pathways by the FHR-proteins in immune cells, cloning of specific protein fragments and functional analyses using a whole blood model. For interaction studies real time attachment and affinity assays will be performed as well as identification of the mouse homologues protein in tissues of *Candida* infected mice. The results from this project will give us a deep insight into the role of these human proteins, and if *C. albicans* evades the immune system by binding FHR-proteins.

We expect:

- a Master's degree (or equivalent allowing you to pursue a PhD degree) in Natural or Life Sciences. Research at ILRS is centred around “**Microbial and Biomolecular Interactions**”. Candidates in the final stages of obtaining their degree are eligible to apply.
- desirable methodological skills: cell culture, ELISA, Western blot analysis
- highly motivated individuals with an interest in joining one of the interdisciplinary research areas of the ILRS
- the ability to work creatively and independently towards developing your own research project
- an integrative and cooperative personality with enthusiasm for actively participating in the dynamic ILRS community
- excellent English communication skills, both written and spoken

We offer:

- a top-level research environment
- efficient supervision by a team of advisors
- a comprehensive mentoring programme and courses in state-of-the-art technologies and soft skills
- a highly communicative atmosphere within a scientific network providing top-level research facilities
- Jena – **City of Science**: a young and lively town and a vibrant local cultural agenda

The three-year Doctoral Researcher position is available starting from May 2019. The position will be financially supported according to TV-L (salary agreement for public service employees). HKI is an equal opportunity employer. Disabled persons with comparable qualifications will receive preferential status.

Further information:

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Dr. Christine Vogler, ILRS Coordinator: ilrs@leibniz-hki.de

Applications are exclusively accepted via the Online Application Portal:

<https://apply.jsmc.uni-jena.de/>

Please acquaint yourself with the scientific projects offered on our [website](#). **Please note that you can choose up to 3 projects of interest in your application. It is only necessary to fill in the application form for your first preference of projects; the other two projects can be selected in the application form.**

Deadline for application: March 20, 2019.

Selected applicants will be invited to a recruitment meeting in Jena on April 10-11, 2019 or May 15-16, 2019.



The ILRS is part of the "Jena School for Microbial Communication" (JSMC) which has been established in 2006 as an umbrella organisation of three existing Research Training Groups. The JSMC is funded by the **German Excellence Initiative**.