Advance Notice: 1 PhD position in Organic Synthetic Chemistry

Project Title: Synthesis of chemical building blocks and probes for natural product identification and target identification

Call: announcement approx. mid of January 2018 **=> ILRS webpage: http://www.ilrs.de/**

Project Start: Spring 2018

Project Outline: Research into microbial sphingolipid signalling is an area of intensive scientific investigation. Sphingoid-like natural products are essential multifunctional cellular compounds, which serve not only as integral components of cell membranes, but also as essential regulatory signals for fundamental inter and extracellular processes. The overall project aims for the structural and functional analysis of this intriguing signalling molecules using a combination of organic-synthetic and natural product chemistry. We will use synthesized sphingolipid-type signalling molecules to understand principle (bio)chemical and small molecule-mediated communication mechanisms within microbe-host interactions.

Main topics and tasks:

- Synthesis of microbial sphingolipid-type signalling molecules (using e.g. metal-organic reactions, enantioselective hydrogenation, etc)
- Development of shorter and atom-economic synthetic approaches
- Derivatisation of natural products for analytical analysis
- Implementation of (additional) functionalities such as fluorescence or photo-reactive tags for target identification
- Analysis of structure-activity-relationships

Requirements:

- Very good theoretical and practical skills in Organic Synthesis
- Expertise in Analytical Chemistry (NMR, HRMS, IR, HPLC, LC-MS)
- The candidate should embrace working in a young international research team
- A Master degree (or equivalent) in chemistry or related natural and life sciences. Candidates about to obtain their degree are welcome to apply!
- An integrative and cooperative personality with enthusiasm for actively participating in a lively community of the HKI, the JSMC (www.jsmc.uni-jena.de) and ILRS (www.ilrs.hki-jena.de) Community
- To be able to perform team-oriented as well as independent work
- Very good communication and writing skills (English)

We offer: A highly translational project with a promising career perspective. Highest standard laboratories with state-of-the-art instrumentation and the collaborative and constructive atmosphere at the HKI provide ideal conditions for the success of your project.
We offer you great work opportunities in a dynamic research institute with high reputation. As a doctoral researcher you will be integrated into the structured training of our graduate schools and benefit from the extensive qualification program of the Graduate Academy of the Friedrich Schiller University. The successful candidate will be hosted in the Junior Research Group *Chemical Biology of Microbe-Host Interactions*.

For further information regarding the research topic: please contact: Dr. Christine Beemelmanns (christine.beemelmanns (at) leibniz-hki.de)
For applications: please check the **ILRS webpage (http://www.ilrs.de/)** for the official upcoming call (approx. mid of January) and further instructions how to submit your applications.