31. August 2018

Microbiome/Chemical Ecology

PhD student position – January 2019 for 3 years

Center for Computational and Theoretical Biology, University of Würzburg
Department of Animal Ecology and Tropical Biology, University of Würzburg

Requirements

Primary requirement is strong interest and motivation in biodiversity/chemical ecology research on molecular and organismal level. Further, applicants must have a MSc/ Diplom (DE) related to one of:

- Metagenomics
- Community ecology
- Pollination ecology
- Chemical ecology
- NextGen-Sequencing
- DNA-Barcoding
- Bioinformatics
- Microbial biochemistry
- Microbial cultivation

The successful candidates must be willing to become acquainted with these topics during the projects, as well as scientific writing in english.

Salary & Conditions

According to public service positions in Germany (50%) for three years. The University of Würzburg is an equal opportunity employer, i.e. female scientists are particularly encouraged to apply and disabled applicants will be preferentially considered in case of equivalent aptitude. We offer membership in friendly and ambitious young research work groups, as part of a vivid departments.

Within a collaborative framework between the CCTB (A. Keller, J. Cabral) and the Zoology III department (T. Schmitt, I. Steffan-Dewenter, S. Leonhardt) the bacterial associates of bees and wasps will be investigated, with focus on the influence of cuticular chemistry on community composition. Tasks of the project will be conducting field work, NGS-based microbiome assessments, bacterial cultivation, bioassays, chemical analyses, statistical modeling and genomics.

> **Project description:** Currently, the inter-dependency of microbes and cuticular chemistry is unclear in insects, although the qualitative and quantitative composition of specific chemical compounds are likely to affect host associated microbiomes. The study seeks to characterize specific cuticular compounds that impact cuticular bacteria, assess their presence on natural Hymenoptera cuticular surfaces and model their interaction. Finally, we aim to find general surface microbiome assembly rules associated with different chemical compositions and underlying life-histories.

Applications and further information

Please send your application via eMail to PD Dr. Alexander Keller (a.keller@biozentrum.uni-wuerzburg.de) as a single PDF document until **21. October 2018**. Applications should include a cover letter, a short summary of research interests, CV, certificates, and contacts of two potential referees.