

Job offer Ref. # 8.2.16

The Senckenberg Gesellschaft für Naturforschung (SGN) is a member institution of the Leibniz Association. With almost 800 employees and its headquarters in Frankfurt am Main, Senckenberg conducts natural history research with research institutions in six federal states of Germany. As an interdisciplinary institute, the Senckenberg Biodiversity and Climate Research Centre (BiK-F) focuses on the interactions between biodiversity and climate.

A cooperative project conducted at the Senckenberg Biodiversity and Climate Research Centre (Frankfurt am Main), the University of Mainz and the University of Würzburg jointly invites applications for a

PhD position “Evolution, genetic basis and behavioural consequences of cuticular hydrocarbon profiles in parabiotic ants” (65%)

Insect cuticles are covered with cuticular hydrocarbons (CHC), which serve two important functions: as desiccation barrier and as cues and signals for chemical communication. Despite their high importance, the evolution of CHC profiles, the underlying genetic mechanisms and the role of specific CHC traits for intra- and interspecific recognition are still poorly understood. As a model system, we will use two parabiotically associated, tropical ant species, *Crematogaster levior* and *Camponotus femoratus*, which show unusually high chemical diversity.

In this project the PhD candidate will mainly focus on the genomic basis of CHC evolution. The candidate will assemble the genome, and investigate the population structure of different chemotypes of *Crematogaster levior* in French Guiana, using state-of-the-art population genomic tools (PoolSeq). In addition, the candidate will use the obtained information on the distribution and diversification of the chemotypes to test and verify the importance of specific CHC compounds and compound mixtures in intra- and interspecific behavioural essays in the field.

The project will be conducted in close collaboration with a second PhD student based at the Universities of Mainz and Würzburg, who will mainly focus on the CHC composition, the identification of candidate genes via transcriptome analyses and their functional verification using RNAi knockouts. Both students will conduct field work in French Guiana, some of the experiments and parts of the analyses together. Therefore, the candidate is expected to work independently within the project framework, but also be a good team worker.

Your profile:

- Master's/diploma in biology, environmental sciences or bioinformatics.
- Strong interest in evolutionary biology, ecology and genetics.
- High motivation to link field-, experimental- and lab work with bioinformatics.
- Excellent communication skills in English
- Programming skills or bioinformatics are important, but optional plus points
- The PhD position is funded for three years by the German Science Foundation. Within these three years the PhD student is expected to finish her/his degree.



Salary and benefits are in accordance with a public service position in Germany (TV-H E 13, 65%). The contract shall start **01.06.2016** and will be initially limited until **31.12.2018**. The Senckenberg Research Institute supports equal opportunity of men and women and therefore strongly invites women to apply. Equally qualified handicapped applicants will be given preference. The place of employment will be Frankfurt, Germany. The employer is the Senckenberg Gesellschaft für Naturforschung.

Please send your application **before March, 24th** preferably by e-mail with a single PDF containing a motivation letter that describes your scientific interests and qualifications fitting this project (1 page), a detailed CV, a copy of the MSc certificate and contact details for 2 possible referees mentioning the reference of this position (**Ref. # 8.2.16**) to the address below:

Herrn
Dr. Tobias Schneck
c/o Senckenberg Gesellschaft für Naturforschung
Senckenberganlage 25
60325 Frankfurt am Main
recruiting@senckenberg.de



For scientific enquiries please contact Dr. Barbara Feldmeyer (barbara.feldmeyer@senckenberg.de), Dr. Florian Menzel (menzelf@uni-mainz.de), or Prof Thomas Schmitt (thomas.schmitt@uni-wuerzburg.de).

In addition, please indicate in your application how our advertisement came to your attention.