

2 PhD positions in Genomics of Coevolution between a slavemaking ant and its host

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IomE JGU Mainz and Senckenberg Bik-F Senckenberg Frankfurt



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We invite you to apply for one of two open 3-year PhD positions (65% TV-L E13) on a project investigating the genomic basis of coevolution between the slavemaking ant *Temnothorax americanus*, an obligate social parasite, and its related host *T. longispinosus*, two species that coevolve in an evolutionary arms race and for which we recently obtained the genomes. We will use populations of a “natural experiment”, in which host and parasite evolve in sympatry (=coevolve) or allopatry. The aim of this study is to identify genomic signatures of this coevolutionary arms race and to functionally validate candidate genes playing a role in the reciprocal host-parasite co-adaptation. For these goals, we will use a suit of different techniques such as behavioral assays, cuticular hydrocarbon profiling (GCMS), transcriptome analyses (RNA-seq), population genomics (Pool-seq, individual genome resequencing) and gene knockdown (dsRNAi).

We are looking for **two highly motivated candidates** with an MSc degree (or equivalent) in Biology, Bioinformatics or related fields. The successful applicant should have a strong background in evolutionary biology, population genetics, behavioral ecology and / or bioinformatics. Experience with social insects are advantageous, but not a must. The working language of our laboratories is English. The University of Mainz / the Senckenberg Bik-F Institute aim to increase the number of women in science, and applications by women are strongly encouraged. Similarly, qualified candidates with disabilities will be preferred.

Successful applicants will join an international and dynamic scientific environment. Associations with the GenEvo Graduate School might be possible <https://www.imb.de/about-imb/joint-research-initiatives/genevo>. Both PhD students will start at the JGU Mainz with one of the two students conducting the population genomics project parts in Frankfurt after 1 year (both labs are only 30 min apart by car). Mainz and Frankfurt are beautiful, lively cities located at the Rivers Rhine and Main with high students numbers and rich social and cultural life. The positions are funded by the German Research Foundation (DFG) for a period of 3 years. Salary is at the scale 13 TV-L (65%). Starting date should be **April 1st 2020** or soon thereafter.

If you wish to apply, please send your application as a single pdf file containing your CV, a 1- page motivation letter, your research experience and interest, BSc and MSc grades, publications (if any), and the names of two potential references. Applications should be sent to Prof. Dr. Susanne Foitzik (foitzik@uni-mainz.de) or Dr. Barbara Feldmeyer (barbara.feldmeyer@senckenberg.de) until **February 4th, 2020**. Skype interviews with selected candidates will likely take place on **February 6th** and onsite interviews on **February 13th 2020**. Do not hesitate to contact us if you have further questions.

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