



iDiv

German Centre for Integrative
Biodiversity Research (iDiv)
Halle-Jena-Leipzig

External Job Announcement Reg.-Nr. 4-6786/22-D

The Martin Luther University Halle-Wittenberg, in cooperation with the German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, offers the following position in Leipzig, **starting on 1 October 2022** or at the earliest opportunity and initially limited to 31 Mai 2025 (pending approval of further funding):

Doctoral Researcher (m/f/d) as part-time employment (65%)

The salary will be up to 65% 13 TV-L, if the personal requirements and tasks are fulfilled. The workplace will be in Leipzig in the research group of Dr Michael Gerth.

The project:

The **German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig** is a National Research Centre funded by the German Research Foundation (DFG). Its central mission is to promote theory-driven synthesis and data-driven theory in integrative biodiversity research. It is located in the city of Leipzig and it is a central institution of the Leipzig University, jointly hosted by the Martin Luther University Halle-Wittenberg (MLU), the Friedrich Schiller University Jena and the Helmholtz Centre for Environmental Research (UFZ). More information about iDiv: www.idiv.de.

This position is affiliated with the project **“Symbiont adaptation in response to host shifts”** in the newly established **Symbiont Evolution group** of Dr Michael Gerth at iDiv. The Symbiont Evolution group aims to better understand how inherited symbionts have become so abundant and diverse, with a particular focus on symbiont host shifts. For more information, please visit our lab website: <https://www.idiv.de/en/symbiont-evolution.html>. Doctoral researchers at iDiv benefit from inter- and transdisciplinary training and support by the iDiv graduate school yDiv.

A majority of arthropod species harbour specialised bacterial symbionts that may influence many aspects of arthropod biology, and are transmitted from mothers to offspring (hence termed “inherited symbionts”). Occasionally, inherited symbionts are transmitted between unrelated individuals. Such host shifts are key to symbiont spread and evolutionary success, yet this process is poorly understood. The goal of the project is to determine how symbionts evolve in adaptation to novel hosts, and to ascertain the factors involved in successful spread of inherited symbionts in novel hosts. The project will employ the *Spiroplasma / Drosophila* model, use artificial host shifts to create novel host symbiont combinations, and investigate genomic evolution of symbionts. Symbiont spread in host populations will further be investigated using experimental evolution. The work will thus comprise handling and manipulation of *Drosophila* populations, as well as microbial genomics and bioinformatics. The candidate will work in an international research environment and will benefit from excellent laboratory infrastructure.



Tasks:

- Planning and conducting of scientific experiments, cultivation and care of animal cultures (*Drosophila*)
- Molecular biology work: DNA extractions, PCRs, creation of next generation sequencing libraries, performance of Oxford Nanopore MinION sequencing
- Bioinformatics work: assembly and annotation of bacterial genomes; determination of genetic variants
- Interpretation and presentation of the work at national and international conferences, as well as in the form of publications in international journals

Requirements:

- Scientific University degree (Diploma/ M.Sc.) in biology or a related field
- Demonstrated knowledge of and interest in evolutionary biology
- Experience in handling of *Drosophila* or similar model organisms desirable
- Experience in molecular techniques (PCRs, DNA extractions), genome sequencing, or bioinformatics desirable
- Strong interest in symbiont ecology and evolution
- Willingness to integrate and contribute to an international research centre
- Fluency in English and good communication skills
- Knowledge of German is advantageous, but not required

The Martin Luther University Halle-Wittenberg gives priority to applications from severely disabled candidates with equivalent qualifications. Women are particularly encouraged to apply. Applicants with a degree that was not obtained at a German higher education institution must submit a Statement of Comparability for Foreign Higher Education Qualifications from the Central Office for Foreign Education (Zentralstelle für ausländisches Bildungswesen) to prove equivalence.

For informal queries about the research project please contact Dr Michael Gerth (michael.gerth@idiv.de).

Please submit your full application dossier only in English with registration number 4-6786/22-D until **21 July 2022**. Applications should be submitted electronically via our iDiv application portal at <https://apply.idiv.de>. Applications should include motivation letter tailored to the research project, curriculum vitae, a digital copy of Master's degree/Diploma or equivalent, and contact details of scientific references. Application portfolios will not be returned, application costs will not be reimbursed.

iDiv is committed to establishing and maintaining a diverse and inclusive community that collectively supports and implements our mission to do great science. We will welcome, recruit, develop, and advance talented staff from diverse genders and backgrounds.