The German Centre for Integrative Biodiversity Research (iDiv) is one of four National Research Centres funded by the German Research Foundation (DFG). It is located in the city of Leipzig and jointly hosted by the Martin Luther University Halle-Wittenberg (MLU), the Friedrich Schiller University Jena (FSU), the University Leipzig (UL), and the Helmholtz Centre for Environmental Research (UFZ). Furthermore it is supported by the Max Planck Society, the Leibniz Association, the Klaus Tschira Foundation and the Free State of Saxony. Its central mission is to promote theory-driven synthesis and data-driven theory in this emerging field. The concept of iDiv encompasses the detection of biodiversity, understanding its emergence, exploring its consequences for ecosystem functions and services, and developing strategies to safeguard biodiversity under global change.

The mission of Molecular Interaction Ecology (MIE) is to unravel the molecular and chemical mechanisms governing interactions between plants and their biotic and abiotic environment. These mechanisms are studied using an integrated approach in which metabolomics and transcriptomics analyses are combined with measures of plant and insect performance. The ultimate goal is to understand the role of plant-based mechanisms in the establishment of aboveground and belowground biodiversity in natural communities.

The Friedrich Schiller University Jena as the employer offers the following position at iDiv- Leipzig as the workplace:

1 Early Stage Researcher (ESR)

on the Marie Curie ITN funded project:
"An integrated "omics" approach to unravel the impact of root symbionts on tomato direct and indirect defenses against herbivores"
in the research group Molecular Interaction Ecology
(limited to 3 years. The salary of Marie Skłodowska-Curie Innovative Training Networks Fellowship (MSC-ITN) follows the rules set by the European Commission)

Severely disabled persons are encouraged to apply and will be given preference in the case of equal suitability.

Background:
The aim of this Marie Curie ITN PhD project is to assess the modulation of tomato defence responses by beneficial soil fungi, particularly arbuscular mycorrhizal fungi (AMF) and *Trichoderma* spp, and assess their impact on the performance of aboveground chewing and sucking insect pests as well as their natural enemies. Using a combination of metabolomics and transcriptomic approaches, the molecular and chemical mechanisms underlying microbial induced resistance (MiR) will be studied on different lines of tomato plants grown under controlled conditions. These analyses will be complemented with assays on insect performance and behaviour that can be directly related to microbe-induced changes in volatile and non-volatile metabolomes. With this integrative "omics" approach, spanning from gene expression to metabolite accumulation, we will obtain a broader view on the biological mechanisms involved in MiR and assess its ecological consequences up to the third trophic level.

Topic / job description:
* design, carry out and analyze biological and chemical experiments related to the research project
* present the research at national and international meetings
* write a Ph.D. thesis and scientific papers in internationally peer-reviewed journals
* supervise BSc/MSc students
* share responsibilities for the research facilities and the scientific atmosphere at MIE and iDiv

Requirements / expected profile:
* Master's or Diploma degree in biology, plant sciences or related fields
* experience with running biological experiments from experimental design to statistical analyses
* experience with chemical or molecular analyses
* excellent knowledge of the English language in speaking and writing, evidenced by your Master's or Diploma thesis
* a clear drive to do science
* flexible and well organized, hands on mentality
* responsible personality with excellent communication skills

Further requirements of MiRA:

The PhD position is associated to a larger European training network, MiRA: www.miraitn.eu with 14 other PhD positions at other participating institutions. Please note that this PhD position requires that at the time of commencement the candidate has not been awarded a doctorate degree and is within the first 4 years (full-time equivalent) of his/her research career. Furthermore, the candidate must not have resided or carried out their main activity (work, studies, etc.) in Germany for more than 12 months in the 3 years immediately prior to their recruitment. Short stays, such as holidays, are not taken into account. The candidate is required to spend part of their project period at other institutions in the MiRA consortium on secondments in Denmark and Spain.

Applications with the reference file number 348/ 2017 are accepted until <mark>14.01.2018</mark>. Please use our application portal under apply.idiv.de.

All applications should include:
- A Cover Letter, detailing your motivation and background for applying for this specific PhD project
- A statement if (and which) you have applied for other MiRA PhD fellowships
- A short outline for research and courses to pursue in the PhD study program
- A Tabular CV
- Diploma and transcripts of records (BSc and MSc)
- 1-3 professional referees (Name, address, telephone & email)
- Documentation of English language qualifications
- Other information for consideration, e.g. list of publications, presentation on international conferences (if any)

For queries on the application process, please contact Dr. Ainhoa Martinez-Medina (ainhoa_martinez.medina@idiv.de) or Prof. Nicole van Dam (nicole.vandam@idiv.de). More information on the working group and the project are available under the Website: http://www.idiv.de/mie

Hard copy applications can be sent to German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Dr. Nicole van Dam; Deutscher Platz 5e, 04103 Leipzig.

Applying via email is questionable under data protection law. The sender assumes full responsibility.