

# Job advertisement

Vacancy ID: 418/2020

Closing date: 14 February 2021



FRIEDRICH-SCHILLER-  
UNIVERSITÄT  
JENA



**iDiv**

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

TreeDi



**Friedrich Schiller University** is a traditional university with a strong research profile rooted in the heart of Germany. As a university covering all disciplines, it offers a wide range of subjects. Its research is focused on the areas Light—Life—Liberty. It is closely networked with non-research institutions, research companies and renowned cultural institutions. With around 18,000 students and more than 8,600 employees, the university plays a major role in shaping Jena's character as a cosmopolitan and future-oriented city.

The DFG-funded International Research Training Group GRK 2324 "**TreeDi - Tree Diversity Interactions: The role of tree-tree interactions in local neighbourhoods in Chinese subtropical forests**" ([www.treedidi.de](http://www.treedidi.de)) seeks to fill the position of a

## **Doctoral researcher on the project: "Biodiversity effects on leaf and litter metabolomes" (m/f/d)**

commencing on 01 June 2021.

The work place will be at the **German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig in the city of Leipzig.**

### **Research topic:**

Plants produce thousands of different metabolites, collectively called the metabolome. Both volatile and non-volatile metabolites are important mediators of plant- interactions, for example with competing neighbours, herbivores, natural enemies or microbes associated with the plant. In the first phase of this ITN, we measured the root and shoot metabolomes of four tree species in the BEF China experiment. We found that leaf metabolomes were particularly responsive to plot diversity level, whereas root metabolomes were rather constant. In the second phase, we aim to link differences in leaf metabolomes to differences in decomposition processes and nutrient cycling in plots with different diversity levels. In brief, we aim to assess: 1) effects of plot and local diversity levels on the volatile and non-volatile metabolomes of woody plant leaves of different age classes (from young to senescent leaves), 2) analyse the metabolomic composition of litter under these woody plants in plots with different diversity levels, and 3) relate litter and litter leachate metabolomes to allelopathy, microbial activity and nutrient cycling in litter and soils. The data generated in this project will also be interfaced with experimental data obtained in other projects, in particular to those monitoring herbivore and parasitism rates, leaf microbial diversity and soil and litter microbial activities and decomposition rates.

The project is supervised by [Prof. Dr Nicole van Dam](#) (Professor of Molecular Interaction Ecology, FSU-Jena and research group leader at iDiv; [nicole.vandam@idiv.de](mailto:nicole.vandam@idiv.de)), [Dr Steffen Neumann](#) (research group leader of Bioinformatics & Scientific Data, Leibniz Institute of Plant Biochemistry (IPB Halle; [Steffen.Neumann@ipb-halle.de](mailto:Steffen.Neumann@ipb-halle.de)) and [Dr Alexander Weinhold](#) (Postdoctoral Researcher in Molecular Interaction Ecology at iDiv; [alexander.weinhold@idiv.de](mailto:alexander.weinhold@idiv.de)).

### **Your responsibilities:**

- Design, carry out and analyze biological experiments and chemical analyses related to the research project
- Analyze metabolomic datasets using multivariate analyses
- Present the research at national and international meetings
- Write your thesis and scientific papers in internationally peer-reviewed journals
- Supervise BSc/MSc students



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- Share responsibilities for the research facilities and the scientific atmosphere at MIE and iDiv

The doctoral researcher will team up with the fellows on the Chinese side, who will focus on nitrogen cycling and litter microbial communities. Supervision and assistance will be provided by a Joint German-Chinese PhD Advisory Committee (PAC), combining empirical and theoretical expertise. All TreeDì fellows will have to submit their PhD thesis as a cumulative thesis, comprising at least three chapters in the form of first author papers in international peer-reviewed journals, of which at least one paper has to be accepted or published at the time of thesis submission. TreeDì fosters early experience in autonomous research, and thus, encourages to become engaged in synthesis, making use of available data from previous projects.

#### **Your profile:**

- M.Sc. or equivalent degree in a project-related field (e.g. biology, plant sciences, environmental chemistry)
- Experience with running biological experiments from experimental design to statistical analyses
- Experience with chemical analyses of plants, for example using HPLC-MS or GC-MS
- Experience with R and (multivariate) analyses of large datasets
- Independent researcher with a clear drive to do scientific research
- Flexible and well organized, hands on mentality
- Fluent in English communication in writing and speaking. Knowledge of German and/or Chinese is an advantage
- Motivated to be a proactive team player in an international research consortium
- Applicants must be prepared to spend substantial time (approx.2-4 months per year) in China for fieldwork and lab visits
- Willingness to work under subtropical field conditions. Field work experience would be advantageous

#### **We offer:**

- Work in a dynamic, international and interdisciplinary environment
- Opportunities to develop and advance scientific networks
- Cutting edge research in modern facilities
- Doctoral researchers at TreeDì benefit from the participation in the TreeDì qualification programme
- Participation in and presentations on international conferences
- Family-friendly working environment with flexible working hours
- Remuneration based on the provisions of the Collective Agreement for the Public Sector of the Federal States (TV-L) at salary scale 13 — depending on the candidate's personal qualifications—, including a special annual payment in accordance with the collective agreement.

The position is limited to 3 years. The employment is part-time at 65%. (26 hours/week)

Queries concerning the application process should be directed to Dr Stefan Trogisch ([stefan.trogisch@botanik.uni-halle.de](mailto:stefan.trogisch@botanik.uni-halle.de)), for project-related questions, please contact Prof. Dr Nicole van Dam ([nicole.vandam@idiv.de](mailto:nicole.vandam@idiv.de)).

**Submission deadline is 14 February 2021.** Selected candidates will be invited to the online joint recruitment symposium taking place in March 2021 (22-23 March 2021).



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### All applications should include

- Cover letter in English describing motivation for the project, research interests and relevant experience
- complete curriculum vitae including names and contact details of at least two scientific references
- digital copy of MA/BA/Diploma certificates

Candidates with severe disabilities will be given preference in the case of equal qualifications and suitability.

Are you eager to work with us? Kindly send your application, quoting the vacancy ID 418/2020, via our application portal at <https://apply.idiv.de>. While we prefer applications via this portal, hard-copy applications may also be sent to: *German Centre for Integrative Biodiversity Research – iDiv (Halle-Jena-Leipzig), HR Department, Puschstr. 4, 04103 Leipzig.*

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.

Since all application documents will be duly destroyed after the recruitment process, we ask you to submit only copies of your documents.

For further information for applicants, please also refer to [www.uni-jena.de/Job portal](http://www.uni-jena.de/Job_portal) (in German).

Please also note the information on the collection of personal data at

[https://www4.uni-jena.de/en/jobs\\_information\\_collecting\\_personal\\_data-path-18.27.html](https://www4.uni-jena.de/en/jobs_information_collecting_personal_data-path-18.27.html).