



**External Job Announcement**  
**Reg.-Nr. 5-8116/21-D**

**MLU-BioDivFund**

Martin Luther University Halle-Wittenberg (MLU) invites applications for the following position:

**Doctoral Researcher (m/f/d) on the project**  
**"Microbial and faunal biodiversity in urban groundwater"**

(starting date: November 2021 or later, limited to 3 years, 65 percent of a full-time employment, salary will be up to Entgeltgruppe 13 TV-L if the personal requirements and tasks are fulfilled, work place will be located at MLU Halle)

Research topic: Investigation of thermal, chemical and geological factors controlling biodiversity in the aquifers of Halle (Saale)

The project is funded by the Federal State of Saxony-Anhalt (MLU-BioDivFund). The programme seeks to expand biodiversity research to new interdisciplinary research fields, which will be done in close cooperation with the German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig as well as with the universities Friedrich Schiller University Jena (FSU) and University of Leipzig (UL) and the Helmholtz Centre for Environmental Research (UFZ).

This project introduces the subterranean regime of the city of Halle (Saale) as benchmark to explore spatial and temporal trends of subsurface biodiversity on an urban scale. Groundwater samples from repeated field measurement campaigns will be analyzed with respect to thermal, hydrochemical, faunal and microbiological characteristics and trends. Based on laboratory and statistical analysis, we want to identify the key factors that shape urban groundwater biodiversity patterns. The interdisciplinary project is supervised by Prof. Peter Bayer, <https://applied.geo.uni-halle.de>, in cooperation with Dr. Martina Herrmann and Prof. Kirsten Küsel (FSU Jena), as well as Prof. Christian Griebler (University of Vienna).

The MLU-BioDivFund researchers will be integrated in a stimulating network of excellence. They will become enrolled in yDiv, the Graduate school of iDiv, which involves an international qualification programme, an interdisciplinary PhD advisory committee (PAC) and unique offers to meet, study and discuss with figureheads in biodiversity research.

**Tasks:**

- Task 1: to plan and carry out repeated groundwater sampling campaigns in an urban environment
- Task 2: to analyze bacterial and eukaryotic communities by amplicon sequencing
- Task 3: to identify groundwater fauna by morphological criteria
- Task 4: to assess metabolic capacities and trophic interaction networks of the groundwater microbiota and fauna under different levels of urban impact.

The doctoral researcher will elaborate the research tasks under joint supervision of hydrogeological and biological experts. The work will be carried out mainly in Halle, with research stays of several months at FSU Jena as well as visits at the University of Vienna. It will be based on a well-planned set of complementary activities combining field and laboratory work, computer-based analysis and interpretation. The participating research groups offer ideal working conditions with modern equipment and continuous support by technicians and student assistants. The new findings will be published together in international journals, and shared with the community by presentations on international conferences.

#### Requirements:

- Master or equivalent degree in a project-related field (e.g. microbiology, biogeosciences, ecology, hydrogeology, environmental sciences)
- Very good ecological knowledge and great interest with regard to groundwater biodiversity research
- Good quantitative and computer-based statistical skills are essential
- Experience with molecular methods to investigate microbial communities in environmental samples would be advantageous (nucleic acid extraction, PCR, qPCR)
- Experience with the analysis of amplicon sequencing data to characterize microbial communities is desirable but not mandatory
- Fluent in English communication in writing and speaking. Knowledge of German is an advantage
- A clear drive to do science
- Flexible and well organized, hands-on mentality
- Field work experience would be advantageous
- Driver's license

The Martin Luther University Halle-Wittenberg gives priority to applications from severely disabled candidates with equivalent qualifications. Women are particularly encouraged to apply.

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. Peter Bayer ([peter.bayer@geo.uni-halle.de](mailto:peter.bayer@geo.uni-halle.de)).

**Submission deadline is 20 August 2021.** Selected candidates will be invited to the online joint recruitment symposium taking place on 29 September 2021.

#### 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
- all document should be submitted as one single pdf file.

Kindly send your application, quoting **the reference number 5-8116/21-D** to Prof. Peter Bayer (Main PI, [peter.bayer@geo.uni-halle.de](mailto:peter.bayer@geo.uni-halle.de)).

The position is offered with reservation of possible budgetary restrictions. Application portfolios will not be returned, application costs will not be reimbursed.