

**Fakultät für
Biologie****Biodiversität****PhD scholarship in aquatic biodiversity/ecology in
Essen****About the position**

A position as a PhD Research Fellow in aquatic ecology is available at the Faculty for Biology, Department Biodiversity, led by Prof. Jens Boenigk. The focus of this group is on the evolution and taxonomic and functional diversity of aquatic microorganisms. Expertise of the members within the group covers a broadness of methods ranging from classical plankton ecology and limnology to molecular amplicon diversity, transcriptomics and genomics further to metatranscriptomics and -genomics including the bioinformatics tools for dealing with such data.

The fellowship will be for a period of 3 years.

Scholarship amount: 1500€ / month

Starting date: between 01.06.-01.07.2019

Application deadline: 15.05.2019

Job description

The candidate will work on a project entitled "Differential potential of metabarcoding, metatranscriptomics, and metagenomics for the assessment of lake water quality", financed by the Bauer und Stemmler foundations. The overall objective of this project is to assess the potential of molecular data from microbial communities (metabarcoding, metagenomics and metatranscriptomics) to act as indicators of water quality. This work will be based on an existing dataset comprising samples from 250 European lakes and further field sampling and laboratory work is planned within the project to extend the dataset.

The project entails field sampling, molecular lab work, bioinformatic analyses of amplicon/metabarcoding, metagenomic and transcriptomic data, as well as statistical analysis of gradients in the data (both in terms of taxonomic and functional diversity), and correlations between these gradients and environmental (physicochemical) variables.

Biodiversität

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17.04.2019

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Tram 101, 103, 105, 106, 107,
109
Bus SB16, 145, 147, 154, 155,
166, 196

The focus of the PhD-thesis will be on the bioinformatics and statistical analyses, while the sampling and molecular work will be a joint effort with another PhD project. The main emphasis can be adjusted according to the research interests and qualifications of the successful candidate.

Qualifications

- A master's degree or equivalent in biology, ecology, bioinformatics or related fields
- Experience with (statistical) programming languages such as R or Python,
- and/or experience with bioinformatic processing of amplicon/metabarcoding-, metagenomic- or metatranscriptomic data is a requirement
- Experience with field sampling and molecular lab work (DNA/RNA isolation, PCR) is an advantage
- Fluent English or German

How to apply

Interested candidates should send a brief statement of research interests/motivation, CV, certificates/transcripts of grades and names and contact information of two references, as one pdf file to Elianne Egge (elianne.egge@uni-due.de)