

## MSc Student opportunity in the SoWA-RI

At the Soil and Water Research Infrastructure (SOWa-RI) we have junior scientific partner positions that are of interest for Master's students.

The selected candidate will join a research team evaluating microbial taxonomic profiling, population dynamics and functioning in the post-mining Lake Medard, Karlovy Vary, Czech Republic.

The research goals will be accomplished through integrative genomics and geochemical proxy analyses in a collaborative multi-disciplinary environment at the Soil and Water Research Infrastructure (SOWa-RI), Biology Centre of the Czech Academy of Sciences (BC-CAS).

The first opportunity (immediately available) is a 6 to 18 months professional practicum.

The selected candidate will first engage on wet bench-work and experimental and analytical protocols of eDNA extraction, quantification and QC control (see [J. Vis. Exp.](#) 2009 (31): 1352). In second stage, she/he will place emphasis in analysis of next-generation sequencing and library construction.

You must be enrolled in the Master of Science programme at the University of South Bohemia ([JU](#)). The position is based in České Budějovice.

The student development would be further enhanced through complimentary structured mentoring activities to provide the skills, knowledge and experience required to prepare her/him to excel in her/his career path.

### Knowledge, Skills and Abilities

The individual is expected to possess 3 or more of the following knowledge, skills, abilities and values:

- Understanding of microbial ecology in aqueous redox interfaces
- Lab workbench experience
- Ability to perform routine eDNA extraction and quantification in water samples
- Aptitude to work within time constraints, solving scientific problems, and achieving team goals and milestones
- Some experience or strong desire to learn the know-how of working with R-based bioinformatics resources for processing 16S rRNA amplicon DNA sequences

### Required Qualifications

Education: BSc degree in molecular and cellular biology, biological chemistry, chemistry, biochemistry, biophysics, with demonstrated interest in microbial ecology, limnology, computational biology, environmental microbiology, or other related disciplines. CEFRL's +B2 level in English language proficiency.

### Preferred Qualifications

- Experience in microbiome analysis, metagenomics is particularly desirable
- Knowledge of aqueous biological systems
- Motivation for independent scientific work and development of bioinformatic tools and pipelines for 16S rRNA-based microbiome analyses, metagenomics, and/or comparative genomics

**The second opportunity (available in 2020)** is for candidate then enrolled in her/his 2nd year of studies and be interested in accomplishing collaborative research by contributing integrative metagenomic analyses to biogeochemical investigations.

For this individual, the preferred qualifications are:

- Interest in amplicon analysis and metagenomics
- Knowledge of aqueous biological systems and environmental microbiology is particularly desirable
- Motivation for independent scientific work with bioinformatic tools and pipelines for 16S rRNA-based microbiome analyses, metagenomics, and/or comparative genomics
- Familiarity with the statistical software R
- Ability to work within time constraints, solving scientific problems, and achieving team goals and milestones
- Ability to effectively communicate research results and their implications to international academic audiences, or commitment to acquire this critical scientific skill within the 2 years formation period

The professional development will be enhanced through structured mentoring activities to provide the skills, knowledge and experience to prepare her/him to excel in her/his career path. To take full advantage of the professional development opportunities linked to this position, the student must complete her/his last semester in the *JU*.

**Application deadline:** Applications will be considered until the position has been filled

**How to apply:** Please send a .zip file including a letter of motivation (in English), a CV, University grades, and the contact details of at least one academic referee. The application as well as inquiries about the position should be addressed to the project leader: Dr. Daniel Petráš: [daniel.petras@bc.cas.cz](mailto:daniel.petras@bc.cas.cz)

#### **Additional information**

This position is based in České Budějovice, ca. 150 km South of Prague. České Budějovice is an attractive, medium-sized historical city with some 100,000 inhabitants. The city is characterized by a relaxed atmosphere, and a growing vibrant community of scientists based both in the University of South Bohemia and the Biology Centre of the Czech Academy of Science (BC-CAS). Both the city and the surrounding countryside offer outstanding opportunities for leisure activities. Living costs are low as compared to Central European standards (e.g., -39% lower than Vienna, -32 % lower than Dresden).

Three faculties and five biological research institutes dealing with essentially all aspects of empirical and experimental ecosystems biology are located on the same campus, allowing easy access to a suite of multidisciplinary research and state-of-the art analytical resources.

The BC-CAS is committed to the principle of equal employment opportunities for all employees and to providing employees with a work environment free of discrimination. All employment decisions at BC-CAS are based on job requirements and individual qualifications. The SoWa-RI values diversity and all qualified applicants are encouraged to apply.

The position is based in České Budějovice and its duration is 12 to 18 months.

**DISCLAIMER:** The BC-CAS is committed to the principle of equal employment opportunities for all employees and to providing employees with an inclusive work environment, free of discrimination. All employment decisions at BC-CAS are based on job requirements and individual qualifications. The SoWa-RI values diversity and all qualified applicants are encouraged to apply.