

January 2024

Open Postdoc position

At the Department of Aquatic Microbial Ecology, Institute of Hydrobiology, Biology Centre CAS, České Budějovice, Czech Republic

A postdoc position is open to study the effects of warming and pollutants on nutrient flows and lower trophic levels in freshwater microbial communities using 16S/18S rRNA gene amplicon sequencing and metagenomics.

Background

Freshwater ecosystems face multiple human-induced environmental stressors including climate warming and chemical pollution. We do not have enough evidence to fully understand and predict community responses to these combined stressors. Using laboratory and mesocosm experiments and state-of-the-art analyses of micropollutants and microbial communities, we will focus on the effects of warming and environmentally relevant concentrations of pharmaceutically active compounds and pesticides on nutrient flows and lower trophic levels from microbes to zooplankton in small standing waters. We will investigate the long-term effects of pollutants and warming on nutrient cycling and pelagic food webs from microbial communities to zooplankton. Our part in this project focuses on pro- and eukaryotic microbes and their taxonomic (via 16S/18S rRNA amplicon sequencing) and functional (via metagenomics) response to long-term exposure to elevated water temperature and chemical pollutants. We are especially interested in antibiotic resistance; we hypothesize that long-term exposure to elevated water temperature and low levels of antibiotics (such as can be found in wastewater treatment effluents) will have a severe influence on the microbial community and will lead to increased antimicrobial resistance (AMR).

Requirements

Applicants should hold a PhD in Biological Sciences (e.g., Limnology, Microbiology, Ecology) and must be strongly motivated to continue their work in an ecogenomics laboratory.

Prior experience in one or more of the following areas is favorably considered:

- molecular techniques (e.g., DNA isolation, PCR)
- 16S/18S rRNA gene amplicon sequencing
- metagenomic analyses
- shell/perl/python/R programming

Candidates must be proficient in English.

Please submit a professional CV, a brief statement of your research interests and work performed (max. 1 page), a list of publications and the names and contact information of two-three professional references. Preferably combine all this information into a single PDF file and send via email with the subject '**Postdoc position**' to michaelasalcher@gmail.com.

The position is available from September 2024 and will remain open until a suitable candidate is found. The position is funded till December 2026 with a possibility of prolongation.

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Infrastructure and Benefits

Position includes standard health insurance and social security and five weeks of holiday yearly. Postdocs have access to accommodation in dormitories at the campus shared by the Biology Centre and the University. Czech courses are available for foreign staff and students to reach a basic level of proficiency in everyday situations. The Biology Centre provides assistance in the visa application process for foreigners.

About the employer

The Department of Aquatic Microbial is an internationally recognized high-class institution for studying freshwater microbes. The Institute of Hydrobiology is the principal institution in the Czech Republic devoted to complex freshwater research of man-made reservoirs and natural lakes. The research portfolio includes the assessment of biotic interrelations and their interactions with abiotic factors. Limnological interactions are studied both within the waterbodies and within the whole catchment. The institute performs research on different levels of interactions from the ecosystem, community, population, organismal, through cellular to molecular levels. The institute is one of the institutes associated in the Biology Centre of the Czech Academy of Sciences in České Budějovice.

About the location

České Budějovice is a medium-sized town ca. 150 km south of Prague with 100,000 inhabitants, a relaxed atmosphere, and a growing expat community at the Biology Centre and the University. Both the town and the surrounding countryside provide numerous opportunities for research and leisure activities. Living costs are low by international standards.

Contact

Please don't hesitate to contact me for further information about the position:
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Links

Biology Centre CAS <https://www.bc.cas.cz/en>
Institute of Hydrobiology <https://www.hbu.cas.cz/en/>
Department of Aquatic Microbial Ecology <https://www.hbu.cas.cz/en/structure/ame/>
Laboratory of Microbial Cultivation and Ecogenomics
<https://www.hbu.cas.cz/en/structure/ame/michis-page/>