

Open postdoc position

The Department of Aquatic Microbial Ecology, Institute of Hydrobiology, Biology Centre CAS, invites applications for a postdoctoral scientist

A postdoc position is open in the Department of Aquatic Microbial Ecology, Institute of Hydrobiology, České Budějovice, Czech Republic to study freshwater bacteria and their phages using cultivation, comparative genomics, metagenomics and experimental approaches. The position is part of a recently granted project to find phages of abundant freshwater bacteria (see below), but it can be tailored to the applicant's interest.

Project background: Phages are present in all ecosystems and structure microbial communities through the regulation of host populations and the release of host-bound nutrients through lysis. Metagenomics revealed a huge phage diversity in nature but often failed to assign hosts to phages. Especially in freshwater environments, this is partly due to the lack of cultured reference phages and their hosts. Recent advances in bacterial cultivation enabled the isolation of abundant freshwater bacteria (e.g., *Fonsibacter*, *Planktophila*, *Methylopumilus*). We have established a large freshwater bacteria collection (>7000 isolates) that includes these abundant species. Here we aim to use these bacteria in a high throughput phage isolation approach to isolate new phages and to *bona-fide* identify phage-host pairs. We will study the host range, natural abundances and dynamics of newly isolated phages. We will complement these approaches with culture independent approaches to quantify isolated phages, identify prophages in the genomes of isolates and in metagenome assembled genomes from long-read metagenomic data of environmental bacteria. The project hence plans to close an important gap in viral ecology by assigning hosts to phages and investigate their natural dynamics in a freshwater reservoir.

Requirements: applicants should have a PhD in Biological Sciences (e.g., Limnology, Microbiology, Ecology, Molecular Biology, Biochemistry, Bioinformatics) and must be strongly motivated to work in an eco-genomics setting. The work is expected to be 70% computational and 30% laboratory based. Prior experience in linux/unix/perl/python programming is favorably considered but is not a prerequisite for selection. Candidates must be proficient in English.

Please submit (preferably all information combined in a single PDF file): (1) a detailed CV (2) a brief statement of your research interests and work performed and (3) the name and contact information for at least two referees.

The position will remain open until a suitable candidate is found. Applications will be evaluated monthly starting November 1st, 2023. Target starting date is January 2024, but an earlier start date is possible. The position is initially funded for 2 years, with further employment depending on funding and performance.

Contact: For further information and to apply contact me at markus.haber@gmail.com. Use Postdoc application in the subject.

Dr. Markus Haber

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About the location

České Budějovice is a medium-sized town ca. 150 km south of Prague and 190 km northwest of Vienna 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 relatively low by international standards.

About the employer

The Department of Aquatic Microbial Ecology 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 whole catchments. 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.

Infrastructure and Benefits

The offered position includes standard health insurance and social security and five weeks of holiday yearly. 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.

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/>