



## PhD position on the Ecophysiology of Aquatic Cyanobacteria

Interested in **phytoplankton ecophysiology**, in the effects of **climate change**, and in **developing new techniques**? Join our team to reveal **how cyanobacteria cope with fluctuating environments**! We are looking for a motivated PhD student in the group for Microbial Photosynthesis at Centre Algatech of the Institute of Microbiology CAS in Trebon, Czech Republic. Our group investigates the mechanisms by which microalgae and cyanobacteria respond to their environment, **from molecular mechanisms to biogeochemical implications**, with a strong focus on the process of photosynthesis.

### THE PROJECT

Short-term fluctuations in environmental conditions such as temperature (e.g., heat waves) and carbonate chemistry (e.g., diurnal pH changes) are expected to increase with climate change. In this project, we investigate how phytoplankton respond to such fluctuations at different time scales. The project involves characterization of physiological acclimation mechanisms as well as application of innovative techniques to determine the role of cell-to-cell heterogeneity in this context.

The selected candidate will conduct experiments with natural communities as well as with laboratory cultures of cyanobacteria to characterize their growth and physiology and apply a range of innovative techniques with single-cell resolution such as flow cytometry, confocal microscopy, and Nanoscale Secondary Ion Mass Spectrometry (nanoSIMS).

### WHAT WE ARE LOOKING FOR

- A BSc/MSc on Aquatic Microbiology, Biological Oceanography, Plant Ecophysiology or related fields
- A profound interest in ecological principles as well as physiological mechanisms
- Experience in cultivation and experimental work with microalgae as well as in flow cytometry, microscopy or other imaging techniques are of advantage. Proficiency in data analysis and image processing are further benefits.
- We seek a candidate with good communication skills, who is self-motivated and able to work independently as well as in a team.

### WHAT WE OFFER

- A friendly international team focused on the ecophysiology, molecular biology and biophysics of photosynthesis, located at an internationally recognized center for basic and applied research on microalgae and cyanobacteria (currently around 100 employees)
- Collaboration with institutes in Hungary (BLKI), the Netherlands (Utrecht University) and Germany (AWI)
- Access to cutting-edge technology (microscopy, mass spectrometry etc.)

- Enrollment at the University of South Bohemia (Integrative Biology PhD programme) provides scientific and soft skill training, support for stays abroad and more. We also offer assistance with the administrative aspects of moving to the Czech Republic and accommodation for the first months.
- Třeboň is a small town set in a tranquil environment in the South of the Czech Republic close to the Austrian border, about 2 h from Prague and 30 min from Ceske Budejovice, surrounded by UNESCO-protected lake-land area and forests as well as historical towns.
- Start date as soon as possible

### **HOW TO APPLY**

Submit a single pdf with a letter of motivation describing relevant experience and research interests as well as a CV including contact information for 2 references to [eichner@alga.cz](mailto:eichner@alga.cz) before May 16<sup>th</sup> 2025. Online or in-person interviews will be scheduled for the end of May.

For more detailed information or questions on the project feel free to contact the PhD supervisor (Dr. Meri Eichner, [eichner@alga.cz](mailto:eichner@alga.cz))

