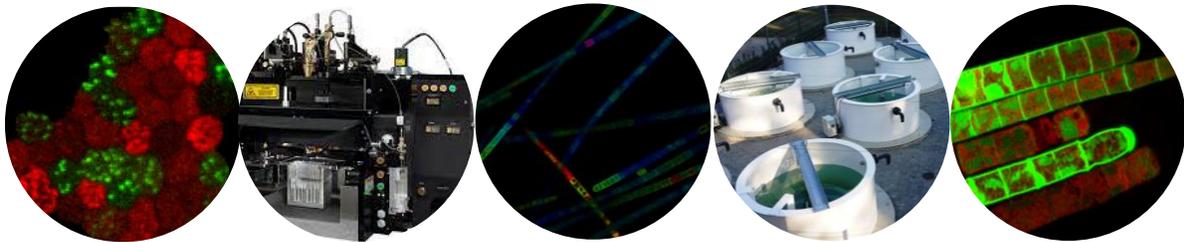


Join our team: PhD position on the Physiology of Aquatic Cyanobacteria

Interested in phytoplankton physiology and single-cell techniques? We are looking for a motivated student to join the laboratory for Microbial Photosynthesis at Centre Algatech of the Institute of Microbiology CAS in Trebon, Czechia and investigate the physiology of cyanobacteria at single-cell resolution.

THE PROJECT

In recent years, an increasing number of studies has shown that individual cells not only in field populations but also in laboratory cultures of microbes can differ from each other both genetically and in their phenotype. In this PhD project, you will focus on quantifying such **cell-to-cell heterogeneity**, understanding the factors that promote it and investigating its implications for cyanobacterial physiology in different contexts. You will be involved in projects dedicated to the ecological function of heterogeneity in a **climate change setting** and/or to increasing algal productivity in a **biotechnology context**.



The selected candidate will **conduct experiments with laboratory cultures** and natural communities of cyanobacteria, **characterize their growth and physiology** and **develop and apply innovative single-cell techniques** based on flow cytometry, fluorescence-activated cell sorting (FACS), Nanoscale Secondary Ion Mass Spectrometry (nanoSIMS), confocal microscopy and other imaging techniques and/or transcriptomics.

REQUIRED QUALIFICATIONS

- A BSc/MSc with a focus on **Aquatic Microbiology, Biological Oceanography, Plant Ecophysiology, Molecular Biology** or related fields
- A **profound interest in physiological mechanisms** and in **developing new methods**.
- Experience in cultivation and experimental work with microalgae as well as flow cytometry, confocal microscopy or other imaging techniques are of advantage. RNA sequencing experience is a plus.
- 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

- Work in a friendly international team focused on the molecular biology, ecophysiology and biophysics of photosynthesis, located at an internationally recognized center for basic and applied research on microalgae and bacteria (currently >80 employees)
- We collaborate with institutes in Hungary (BLKI), the Netherlands (Utrecht University), Japan (Tokyo University) and Germany (AWI)

- Plentiful learning opportunities concerning new methods, access to cutting-edge technology (microscopy, mass spectrometry etc.)
- Enrollment at the University of South Bohemia, Ceske Budejovice (Physiology and Developmental Biology PhD program) provides opportunities for 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 and invigorating environment located in the south of the Czech Republic close to the Austrian border, in a rural setting 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 asap

HOW TO APPLY

Submit a single pdf with a letter of motivation describing previous experience relevant to the project and research interests, as well as a CV including any publications and contact information for two references to eichner@alga.cz. Review of applications will start on May 20th, 2024.

For more detailed information or questions on the project feel free to contact the PhD project supervisor Dr. Meri Eichner (eichner@alga.cz). Info on the Lab: <https://www.alga.cz/en/c-285-ondrej-prasil-s-group.html>