CENTRE ALGATECH

Institute of Microbiology, The Czech Academy of Sciences

PhD position: Ecophysiology of Marine N_2-fixer

The Centre Algatech is currently looking for PhD students and Postdocs to join the group for the Ecophysiology of Algae in two recently funded projects on the physiology and ecology of marine N_2 fixing cyanobacteria.

Specifically, we are looking for a **PhD candidate** to join our project

Energy costs of C and N metabolisms in unicellular cyanobacteria

Conventionally, nitrogen (N_2) fixation is considered to be energetically costly since it requires free energy in the form of electrons and ATP to break triple bond of N_2. In line of this reasoning, the non-diazotrophs that utilize more reduced N sources like NO_3^- or NH_4^+ outcompete diazotrophs. However, the detailed calculations show, that when compared with NO_3^- assimilation, the total free energy required for growth is similar in both cases. The aim of the PhD project is to experimentally quantify energy budget of unicellular diazotrophic cyanobacteria *Crocosphaera* and *Cyanothece* under relevant ecological conditions.

We are looking for a motivated PhD student who will perform laboratory experiments of growing cells in bioreactors and sampling for suite of physiological, metabolomic and biochemical analyses, including proteomics. A BSc/MSc in Biological or Chemical Sciences with a focus on Marine Biology, Plant Physiology, Microbiology, Biophysics or related fields, as well as a interest in algal physiology are required. Experience in chlorophyll fluorescence techniques, protein biochemistry, stable isotope incubations and/or working with phytoplankton cultures is preferred, but additional training will be provided. Funding is available for at least 3 years, subject to satisfactory progress after initial period. Start date at the earliest convenience.

For questions on this position, please contact Prof. Ondřej Prášil (prasil@alga.cz, project leader). To apply, please send a motivation letter, CV and two reference letters or contact details for references to prasil@alga.cz. Review of applications will start on February 20th. Skype interviews will be conducted end of February / early March.

Algatech Centre of the Institute of Microbiology of the Czech Academy of Sciences, is an internationally recognized centre for basic and applied research on microalgae, cyanobacteria and photosynthetic bacteria in Třeboň, Czech Republic (www.alga.cz). Algatech currently employs > 80 researchers and students in all areas of algal research. The Research in the Laboratory of Photosynthesis is focused on molecular biology, ecophysiology and biophysics of photosynthesis. We provide a friendly working environment, as well as assistance with administrative aspects of moving to the Czech Republic and accommodation for the first months. Třeboň is a small town 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 offering plenty of hiking opportunities, as well as by historical towns renowned for their local breweries.