

Recommendation of the PhD advisor

Title of the PhD thesis: Phototrophic microorganisms in extreme environments

Author: Mgr. Hana Medová

Miss Hana Medová MSc. started her PhD programme in Biophysics in 2007 at the Institute of Physical Biology in Nové Hradky, now administered by the Faculty of Science. Her PhD thesis focuses on the presence and survival strategies of phototrophic microorganisms in various extreme environments including habitats with high mineralization, low pH, low or high temperature. In addition she investigated in more detail the molecular mechanism of adaptation of anoxygenic reaction centers to high temperature.

Hana employed in her work several biophysical and biochemical techniques, namely infra-red epifluorescence microscopy for the enumeration of oxygenic and anoxygenic prokaryotes, variable fluorescence for measurements of physiological status of phototrophic microorganisms, and high performance liquid chromatography (HPLC) for pigment analyses. Hana conducted her work with full interest and creativity without the need of much supervision. During tedious measurements she also proved her diligence and patience.

Hana fulfilled all the required study duties. She participated in the Group on Aquatic Primary Productivity (GAP) workshop in Eilat, Israel, 2008, the Polar Ecology field course organized by the University of South Bohemia on Svalbard in 2011 and in several field campaigns in the Czech Republic.

In 2012, Hana visited, for 5 months, the laboratory of Dr. Marc Schallenberg, University of Otago, Dunedin, New Zealand where she participated in a monitoring project of coastal lagoon Waituna.

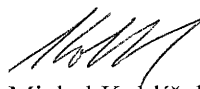
Hana participated in a Summer school at Nové Hradky in 2009 and 2010, where she led projects on Peat bog and Fish pond ecology. She trained, in total three, high school students from the CR. She also helped with the AAP workshop organized by our laboratory in Třeboň in 2010.

Hana presented her results in several domestic and international meetings. She gave lectures (in Czech) on the Czechoslovak Limnology Society symposium in Třebon, 2009 and at the Czechoslovak Microbiology Society meeting in Jasna, Slovakia. She presented posters at the American Society for Limnology and Oceanography conference in Nice in 2009, at the BioMicroWorld09 meeting in Lisboa, Portugal and at the AAP workshop in Třeboň in 2010. She also presented lectures at the ASLO meeting in San Juan, Puerto Rico in 2011, and at the Symposium on Aquatic Microbial Ecology 2011 in Rostock, Germany. She took part in the New Zealand Freshwater Science Society conference in Dunedin, New Zealand, 2012.

Hana is currently an author of one and a co-author of three research papers, and a sole author of one science popularization paper in Czech. Some other works are currently submitted or in preparation.

I conclude that Miss Hana Medová MSc. has fulfilled all her duties as PhD student and demonstrated all skills and knowledge for future scientific carrier. The present thesis fully meets international standards. Therefore I am glad to suggest its acceptance and recommend its positive evaluation.

In Třeboň, March 30th, 2013



Mgr. Michal Koblížek Ph.D.
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