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Dissertation thesis of **Andreja Kust** entitled:

Polyphasic analysis and secondary metabolite patterns in unbranched heterocytous cyanobacteria with different life strategies

Supervisor's assessment

Andreja Kust first visited our lab during her master study in Osijek, Croatia. At that time she started a collaboration with Eliška Kozlíková-Zapomělová. She originally planned to continue this work also during her PhD study. After some time, when Eliška entered her maternity leave, Andreja became my PhD student although I have then just finished my own PhD degree, which presented a new and challenging situation for both of us.

In the beginning of her project, Andreja had to deal with a long and tedious sequence of negative results. Many people would have already given up in her situation. However, she was extremely stubborn and continued to work. I have rarely seen such a hard-working and independent young researcher. During her study, Andreja was able to learn a wide array of techniques not only in molecular, phylogenetic, and bioinformatic analysis, but also in extraction and mass spectrometry analysis of secondary metabolites. She has developed her own ideas and established independent international collaborations (Argentina, France), successfully applied for travel grants and internships, and presented her results in numerous international conferences. She has even organized an international meeting of young researchers at our institute. She was also able to formulate her results in form of high-quality manuscripts, resulting in peer-reviewed papers contained in her thesis.

While the topic of the thesis is relatively wide due to above mentioned circumstances, its individual contributions are tightly related by in-depth analysis of the still understudied group of cyanobacteria, with a focus on bioactive secondary metabolites and their ecological distribution.

Andreja was an excellent PhD student and I am sure she will continue to establish her own research team and follow her interesting ideas in close future. I fully support her application for a PhD degree.

RNDr. Jan Mareš, Ph.D.