



Kateřina Bišová, Ph.D.

Laboratory of Cell Cycles of Algae

Institute of Microbiology of the Czech Academy of Sciences

Opatovický mlýn, 379 81 Třeboň, tel.: 384 340 480,

e-mail: bisova@alga.cz

Třeboň, 9. 6. 2023

Supervisor evaluation on PhD student Veronika Kselíková

Mgr. Veronika Kselíková joined our laboratory in 2017, originally to work as a technician. With a few hints during the interview, it quickly became clear that she would be an even better addition to the team as a PhD student. It took some time and persuasion to convince her, but it soon paid off. In her new position as a graduate student, she began working on a project that looked at the response of algae to deuterium. She plunged right into the new field. She learned how to cultivate green algae, and when it became clear that the cultures needed to be better defined, she quickly learned how to prepare the highly defined synchronized cultures. In addition to the biological part, the project also included a significant technical part. The main problem we faced from the beginning was the limiting high price of deuterated water. We decided to reuse the water, so Veronika built a distillation plant to recover the deuterated water we used. It was soon clear that deuterated water becomes significantly contaminated during cultivation due to the water vapors in the air used to bubble the cultures. It was clear that the air drying system we were using was anything but effective. Veronika helped us set up and operate a custom-built air drying system that not only allowed us to recover the deuterated water without significant contamination, but more importantly ensured that the high concentration of deuterium was maintained during the lengthy algae cultivation process. Given the slow growth of algae in deuterated water, Veronika's experiments took several days each. Therefore, she also needed the help of other lab members, especially technicians, to collect samples. At the same time, the experiments were quite complex, as the cultures were moved from one concentration of deuterium in the medium to another. And all of this was done at a regime when small amounts of the medium had to be collected in the proper flasks for heavy water recovery. So Veronika created extensive color coding for each of her cultures, spent a lot of time preparing all the sampling vessels and explaining how the sampling should be done and what to do if a problem arose. She was always grateful for any form of help from other people, and at the same time always willing to help anyone in the lab with whatever was in her power. Whatever new challenge was thrown at her, she would think about it at length and then throw herself into the solution with tremendous enthusiasm, dedication, motivation and perseverance. More importantly from the team's perspective, she proactively shared everything she learned. She arranged to share everything, documents,



Kateřina Bišová, Ph.D.

Laboratory of Cell Cycles of Algae

Institute of Microbiology of the Czech Academy of Sciences

Opatovický mlýn, 379 81 Třeboň, tel.: 384 340 480,

e-mail: bisova@alga.cz

and approaches that were helpful to everyone by creating a "Scientist'life hacks" folder in the shared lab server. She applied the same proactive approach to everything she worked on. Soon she became an independent researcher, but she was always striving to get better, to learn something new. We spent a lot of time discussing the results, thinking about what they might mean and how to approach them experimentally. It was always a pleasure to discuss with Veronika, because she was always perfectly prepared, providing both background information and her ideas about the problem. Finally, her work focused on compiling the data for writing the paper. Again, even the first drafts were as well thought out as those of an experienced researcher should be.

During her doctoral work, she mastered techniques of basic microbiology and algae cultivation methods, including synchronization of algae. She also developed and optimized minimal versions of biochemical analyzes of starch content in algal cells and analyzes of reactive oxygen species in situ in algal cells. During her Erasmus stay in the laboratory of Claire Remacle at the College of Liège, she learned different variants of starch analyzes as well as other techniques of organelle physiology.

Veronika Kselíková is a dedicated and highly motivated scientist with an extremely helpful and cheerful personality. She is creative, persistent and results-oriented. She is hardworking, independent and always interested in learning a new method; but also in passing on what she has learned. She has very good data synthesis and presentation skills, so she can explain even complex problems such as the effects of deuterium on algae in an engaging way. She has also been an enthusiastic, meticulous, and devoted mentor. I consider Veronika Kselíková to be above average in maturity and at the same time a very pleasant person with strong social skills, a drive to communicate and collaborate, and a keen interest in learning new skills and expanding her horizons. I also consider her a mature scientist, which she has demonstrated by organizing and conducting experiments, compiling the data, putting it in context, and publishing it in scientific journals. I am confident that Veronika Kselíková will excel at any task or path she chooses. I would always consider it an honor to be able to supervise a doctoral student like her.



Kateřina Bišová