

Supervisor report for bachelor thesis by Markéta Macho:

Isolation of Quorum Sensing Inhibitory compounds from Cyanobacteria

I first met Markéta on a field practice course which was part of her bachelor degree program during the winter semester in October 2017. She was introduced by two of my lab members as a potential candidate interested in work on natural products and moreover come to our small den Algatech. Soon, she visited our lab and showed her interest in our field of expertise. Due to heavy study load she was not able to start the work in 2017, but from 2018, she started coming to the laboratory regularly even after her classes. During her first year of work, which was just two times a month, she was just assisting me with my regular laboratory work. She showed her dedication and motivation towards our line of work, which led me to provide her an independent interdisciplinary project. Since then Markéta was able to work independently, to establish and develop nicely a rather complex experiments, understanding its logical principle, organize the laboratory and then write a pertinent and well written Bachelor thesis reporting this experience. Although she could always count on the constant advice from many experienced people around the lab and in the institute.

The thesis titled "Isolation of Quorum Sensing Inhibitory compounds from Cyanobacteria" shows the diversity and potentiality of cyanobacterial species towards discovery of alternative strategies in search for natural products. The development of unconventional strategies of treatment of bacterial infections is crucial in the fight against rising drug-resistant pathogens, which proves ever more important nowadays with new outbreaks reported every few months. Her current work shows an interesting fact related to the presence of quorum sensing inhibitory molecules among the crude extracts. She participated in every step of the project and was trained and tutored by me and other lab members. Her contribution in our small group cannot be unnoticed and can be well reflected by her presence in paper publications. There are two more publications underway on her name, expected to be published by the end of this year. A wider screening led us to identify at least 10 strains for future work for the isolation of bioactive lead molecule during her masters tenure in our group. Meanwhile, Markéta is also getting trained with the molecular aspects of drug discovery by Dr. Subhasish Saha, and has already been selected for Erasmus studies in Germany, where she will be trained further.

In summary, I believe the Bachelor thesis by Makéta Macho is a very nice piece of work, which should be more than enough to complete the Bachelor studies. Also I believe that she has a good potential for developing more in deep studies on these and related topics.

Kumar Saurav
Trebou, 08-07-2020