

Statement of the supervisor on the course of doctoral study of Mgr. Nina Vaněčková

Nina Vaněčková studied at the Faculty of Pharmacy of Charles University between 2007 - 2012. During her undergraduate study she worked on her diploma thesis at the Department of Pharmaceutical Botany under the supervision of assoc. prof. ing. Lucie Cahlíková, Ph.D. Then she decided to continue in her study and she entered into a 4-year full-time course in the Study Program of Toxicology of Natural Substances on 1 October 2012, which was later merged with the study program Pharmacognosy. The subject of her doctor thesis was concentrated on the isolation of Amaryllidaceae alkaloids from selected plants. After evaluation of results of screening studies the plant *Nerine bowdenii* was selected for detailed phytochemical study and isolation of alkaloids. The isolated compounds were then studied for biological activities connected with potential treatment of Alzheimer's disease (inhibition of AChE/BuChE, POP) and oncological diseases (screening studies on different cancer and healthy cells). During the study, she passed the following exams: Phytochemical analytical methods, English, Chemistry of natural compounds, Pathobiochemistry and Systematic biology - sources of natural poisons and toxins and State doctoral exam for Pharmacognosy and toxicology of natural compounds in December 2016. She also participated in several methodological courses in connection with the needs of Doctoral Studies (course on Mass Spectrometry at the University of Pardubice).

The study was interrupted in 2014 for 15 months because of her maternity leave. Then Nina Vaněčková changed the type of study to combination form and her activity was concentrated on the evaluation of obtained results and preparation of backgrounds for publications.

Based on the results obtained, the most active alkaloids were selected for further detailed studies and for the preparation of derivatives in order to extend the portfolio of tested substances and to study the relationship between structure vs. activity. Nina Vaněčková was very inventive at work, she has great technical skill for laboratory phytochemical work, and she was capable of working independently.

The quality of her work is evidenced by the publishing activity: she is either the lead author or co-author of 8 original works (1x as first-author, all with the IF), and co-author of a book chapter. The results of the experiments have been presented at three national conferences (2x in the form of a lecture, 1x in the form of a poster).

If I have to evaluate the doctoral study of Nina Vaněčková, I would say that it was good study, benefiting for the field of natural substances, the Department of pharmaceutical botany, the ADINACO Research Group and also for me.

Hradec Králové 20th October 2018

doc. Ing. Lucie Cahlíková, Ph.D.

Supervisor of doctor study