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Supervisor's statement to the dissertation of Mgr. Hana Tykalová

M.Sc. Hana Tykalová submitted her doctoral dissertation on the topic 'Interaction of tick-borne encephalitis virus with host and vector cells'. The dissertation fulfills all the requirements for a doctoral thesis in terms of structure and content. There is a set of 5 original papers with a clearly defined share of the author's work in the results part of the thesis. The complete dissertation volume is supplemented by an introduction to the subject of tick-borne encephalitis from the point of view of infectious medicine and epidemiology of the disease, and in particular the biological and structural properties of the tick-borne encephalitis virus as well as the mechanisms of the immune response of hosts and tick vectors and other recommended components of the dissertation volume.

The doctoral thesis is a mosaic of topics that have been addressed as part of grant projects in the Laboratory of Molecular Ecology of Vectors and Pathogens since Hanka entered the doctoral study program of 'Parasitology' in our laboratory in 2009. Since then 13 years have passed, interrupted in 2013 for five years by maternity leave, when Hanka devoted herself mainly to the duties and joys of motherhood. It must be remembered that even during such seemingly long break, Hanka was in close contact with us, coming to the laboratory whenever she could, evaluating previous experiments and step by step getting closer to the desired goal.

Time schedule in the phase of finishing her dissertation were disrupted by the covid-19 pandemic, when the faculty part of our laboratory joined the network of South Bohemian laboratories for PCR diagnostics of SARS-CoV-2, and Hanka had also joined the lab for the necessary period of time in routine PCR testing of covid-19. With great diligence and tenacity, she managed to finish her dissertation.

Hanka is extremely demanding of herself, extremely precise in her actions in the laboratory and when preparing experiments and evaluating results, at the same time very dedicated to the team, willing to help or advise fellow workers including students at any time. She has extensive experience with students in teaching Biochemistry Laboratory courses, practicing tissue cultures and guiding undergraduate students. Hanka is indispensable for the functioning of our laboratory.

In 2012, she completed a three-month doctoral workplace placement in the laboratory of Professor Alain Kohl in the Arbovirus Laboratory at the University of Glasgow. Working in Glasgow, Hanka

not only gained valuable experience from working with other arboviruses transmitted by ticks (Langat), mosquitoes (Zika) and methods of studying the innate immunity of cells susceptible to viral infection *in vitro*, but also significantly contributed to the start of a long-term collaboration with Professor Alain Kohl and Dr. Esther Schnettler. Therefore, I became very happy when Alain agreed to be appointed the Hanka's co-supervisor.

In conclusion, **Mgr. Hana Tykalová** submitted doctoral thesis of the high quality, having fulfilled all other requirements within the doctoral program of Parasitology. Therefore, I am pleased to recommend with the best conscience the Hanka's thesis for defense as a basis for the academic title of 'Doctor' (Ph.D. in brief).



Prof. Libor Grubhoffer, supervisor

In České Budějovice, October 14, 2022