



Přírodovědecká
fakulta
Faculty
of Science

Jihočeská univerzita
v Českých Budějovicích
University of South Bohemia
in České Budějovice

SUPERVISOR'S STATEMENT ON DIPLOMA THESIS

Name of the student: Bc. Kateřina Jaklová

Study program: Experimental Biology

Department: Department of Chemistry

Thesis title: Characterization of nuclear and cytoplasmic interactome of tick-borne encephalitis virus capsid protein

Supervisor: RNDr. Martin Selinger, Ph.D.

Supervisor's affiliation: Faculty of Science, University of South Bohemia, Czech Republic & Faculty of Medicine, Umeå University, Sweden

	Point scale ¹	Points
(1) FORMAL REQUIREMENTS		
Formal and graphical quality of the thesis	0-3	3
Ability to work with literature	0-3	3
Language and stylistics	0-3	3
Formal requirements – points in total		9
(2) PRACTICAL REQUIREMENTS		
Fulfillment of the aims	0-3	3
Ability to understand the results, their interpretation, and clarity of the results, discussion, and conclusions	0-3	2.5
Discussion quality – interpretation of results and their discussion with the literature	0-3	2.5
Experimental difficulty of the thesis, independence in experimental work	0-3	3
Contribution of the thesis to the knowledge in the field and the possibility to publish the results (after eventual supplementary experiments)	0-3	3
Practical requirements – points in total		14
POINTS IN TOTAL (MAX/AWARDED)		
	24	23

¹ Mark as: 0-unsatisfactory, 1-satisfactory, 2-average, 3-excellent.

Comments of the supervisor on the student and the thesis:

During her bachelors, Kateřina spent a lot of time in our lab playing with TBEV NS5 detection. At that time, Kateřina had mastered a wide variety of methods and already tackled the question of protein detection in various cellular compartments. Her enthusiasm and skills were beyond the level of an average bachelor student, so I was very happy when Kateřina decided to carry on with TBEV-focused master thesis in our lab. Based on our recent paper describing TBEV C localization in nucleus, we agreed on combining her experience with our plan to describe TBEV C interactome in various compartments of TBEV-infected cell.

Although we already had few of the protocols optimized, the chosen topic of compartment-specific TBEV C interactome proved to be a challenge for Kateřina. Especially, when the whole situation has become more complicated by my postdoc internship in Sweden. Nevertheless, I am glad to say that Kateřina handled it in an outstanding way – in spite of experiencing the real face of science through many steps of optimizations and my absence to help her directly, Kateřina always remained positive and deeply focused on the problem. Just to quickly overview her work, Kateřina managed to optimize the procedure of cell fractionation, obtaining nuclear, cytoplasmic and membrane fractions. Then, she optimized the TBEV C co-immunoprecipitation for couple of rounds, each of those heavily based on the co-operation with dr. Dyčka, who helped us to troubleshoot the MS results. Finally, Kateřina analyzed the MS results and suggested few proteins, which might be of further interest.

Overall, I am highly satisfied with Kateřina's work and it was my pleasure to distantly supervise her. I also need to thank all my lab colleagues for real-time co-supervision, especially dr. Věchtová, dr. Štěřba, and dr. Dyčka. According to the online meetings we had, I can say that Kateřina stood up to my expectations and proved to be a diligent, independent, and an active student, who is able to correctly interpret the obtained data and develop new approaches when facing a problem. The data she obtained, even though not finalized, are a valuable source of knowledge and we hope that we will be able to pursue the TBEV C research further.

Conclusion:

In conclusion, I **r e c o m m e n d** the thesis for the defense.

In Umeå, Sweden, 15.5. 2023

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