Přírodovědecká   Jihočeská univerzita
fakulta   v Českých Budějovicích
Faculty   University of South Bohemia
of Science   in České Budějovice

STATEMENT OF THE BACHELOR THESIS REVIEWER

Name of the student: Stepan Demchyshyn

Thesis title: **Further Delineation of** *Borrelia burgdorferi* **Restriction-Modification system and understanding antibiotic resistance in** *Borrelia afzelii*

Supervisor: **Ryan O.M. Rego, PhD**

Reviewer: **Mgr. Lenka Malinovská, PhD**
Reviewer' affiliation: **CEITEC Masaryk University**

	Point scale[1]	Points
(1) FORMAL REQUIREMENTS		
Extent of the thesis (for bachelor theses min. 18 pages, for masters theses min. 25 pages), **balanced length of the thesis parts** (recommended length of the theoretical part is max. 1/3 of the total length), **logical structure of the thesis**	0-3	3
quality of the theoretical part (review) (number and relevancy of the references, recency of the references)	0-3	3
Accuracy in citing of the references (presence of uncited sources, uniform style of the references, use of correct journal titles and abbreviations)	0-3	3
Graphic layout of the text and of the figures/tables	0-3	1
Quality of the annotation	0-3	2
Language and stylistics, complying with the valid terminology	0-3	3
Accuracy and completeness of figures/tables legends (clarity without reading the rest of the text, explanation of the symbols and labeling, indication of the units)	0-3	2
Formal requirements – points in total		17
(2) PRACTICAL REQUIREMENTS		
Clarity and fulfillment of the aims	0-3	2
Ability to understand the results, their interpretation, and clarity of the results, discussion, and conclusions	0-3	2
Discussion quality – interpretation of results and their discussion with the literature (absence of discussion with the literature is not acceptable)	0-3	2
Logic in the course of the experimental work	0-3	3
Completeness of the description of the used techniques	0-3	3
Experimental difficulty of the thesis, independence in experimental work	0-3	3
Quality of experimental data presentation	0-3	3

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

The use of up-to-date techniques	0-3	3
Contribution of the thesis to the knowledge in the field and possibility to publish the results (after eventual supplementary experiments)	0-3	2
Formal requirements – points in total		23

POINTS IN TOTAL (MAX/AWARDED)	**48**	**40**

Suggestions and questions, to which the student has to answer during the defense:

1) Page 10, Chapter 2.1.3 – Is vector pBAD33 compatible with blue/white screening? Why was the antibiotic carbenicillin used for the selection (whereas pBAD33 carries resistance to chloramphenicol)?

2) Page 10, Chapter 2.1.4 – Was any antibiotic used during cultivation to prevent the loss of the plasmid?

3) Figure 12, 13 – Are the depicted structures of BBQ67/BBEO2 homologues experimental structures? If yes, why they were not used for the homology modeling? If they are models, how they were obtained?

Eventual mistakes, which the students should avoid in the future:

Try to avoid formal mistakes in the layout of the text, i.e. different styles of the formatting, different spacing in some words (page 2, 4, 5, 6 etc.), incorrect text references for figures (page 19, figure 10; alleged page 29, figure 14), missing page numbers (from hypothetical page 28) and incorrect page numbers (page 21 followed by 26). Also, informal terms (lab) should be avoided.

Eventual additional comments of the reviewer on the student and the thesis:

This bachelor thesis contains the theoretical part of good quality and student used an impressively broad range of techniques (molecular biology, bioinformatics methods) in the practical part. Although not all of (many) aims were fulfilled successfully and future optimization of methodology is necessary, this thesis contributed to the research of restriction-modification systems in *Borrelia*.
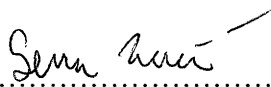
Conclusion:

In conclusion, I

r e c o m m e n d

the thesis for the defense and I suggest the grade   **B**

In Brno   date 6.1.2016

signature