



Přírodovědecká
fakulta
Faculty
of Science

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

OPPONENT'S REVIEW ON BACHELOR/~~DIPLOMA~~^{*} THESIS

Name of the student: Sandra Suleiman

Thesis title: Use of construct to knock out *bga66* and *bga71* in *Borrelia bavariensis* and further development of the mouse-tick model

Supervisor: Ryan O.M. Rego

Referee: Deepak K Sinha

Referee's affiliation: Institute of Parasitology, Ceske Budejovice

| | 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 | 1 |
| Quality of the theoretical part (review) (number and relevancy of the references, recency of the references) | 0-3 | 2 |
| Accuracy in citing of the references (presence of uncited sources, uniform style of the references, use of correct journal titles and abbreviations) | 0-3 | 2 |
| Graphic layout of the text and of the figures/tables | 0-3 | 1 |
| Quality of the annotation | 0-3 | 1 |
| Language and stylistics, complying with the valid terminology | 0-3 | 1 |
| 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 | 1 |
| Formal requirements – points in total | | 09 |
| (2) PRACTICAL REQUIREMENTS | | |
| Clarity and fulfillment of the aims | 0-3 | 1 |
| Ability to understand the results, their interpretation, and clarity of the results, discussion, and conclusions | 0-3 | 1 |
| Discussion quality – interpretation of the results and their discussion with the literature (absence of discussion with the literature is not acceptable) | 0-3 | 1 |
| Logic in the course of the experimental work | 0-3 | 1 |

* Choose one

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

| | | |
|--|-----------|----------------------------|
| Completeness of the description of the used techniques | 0-3 | 2 |
| Experimental difficulty of the thesis, independence in experimental work | 0-3 | 1 |
| Quality of experimental data presentation | 0-3 | 1 |
| The use of up-to-date techniques | 0-3 | 2 |
| Contribution of the thesis to the knowledge in the field and possibility to publish the results (after eventual supplementary experiments) | 0-3 | 0 |
| Practical requirements – points in total | | 10 |
| POINTS IN TOTAL (MAX/AWARDED) | 48 | (19-48)² |

Comments of the reviewer on the student and the thesis:

It was nice to get an opportunity to go through thesis of Bachelor student Sandra with a very attractive title and achievable objectives. The aims of this thesis were to investigate interstadial transfer of spirochete, develop artificial infection strategies and to knockout two important genes from *Borrelia bavariensis*. The project was important for tick biologists and positive results would have benefitted as a publication.

The thesis was evaluated based on certain criteria such as techniques learnt, detail description of work done, systematic understandable results followed by plausible reasoning and discussion. The thesis enumerates basic molecular biology techniques and Sandra got a good opportunity to learn these techniques. This is important for a bachelor student beside various academic activities in their course. However, while mentioning all these details in the thesis, it was disappointing to observe multiple minor mistakes and noticeable repeat of experimental method in-material and method section. Further, the organization of result section was bad, and the content showed maximum similarity with that of materials and methods. Sandra was unable to identify reasons for experimental failure or even focused on a result that she derived. The figures were very pathetic with very less clarity. The thesis was not up to the mark as should be from an inquisitive bachelor's student.

Suggestions and questions, to which the student has to answer during the defense. Mistakes, which the students should avoid in the future:

- Questions: 1. In restriction digestion, why you used E.coR1?
2. Why you used 60s elongation step in PCR?

Mistakes to avoid:

Repetition of segments, sudden appearance of abbreviations

Conclusion:

In conclusion, I r e c o m m e n d / ~~do not recommend~~* the thesis for the defense and I suggest the grade 03 .³ In Ceske Budejovice date 25.01.19

signature

Deepak K. Singh

² Enter the number of points awarded.

³ You can suggest a grade, which can be modified during the defense based on the presentation. However, if the reviewer is not present at the defense, the grade will not be counted. Grades: excellent (1). Very good (2), Good (3), Unsatisfactory/failed (4).