



Přirodovědecká
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: Peter Weber

Thesis title: Adapting genetic methods for transposon mutagenesis and fluorescent markers in *Borrelia*

Supervisor: Ryan O.M. Rego, PhD

Referee: Dr Miray Tonk

Referee's affiliation:

Justus-Liebig University Giessen
LOEWE Centre for Translational Biodiversity Genomics
Institute for Insect Biotechnology
Heinrich-Buff-Ring 26-32
35392 Giessen
Germany

	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	3
Quality of the annotation	0-3	3
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		20

* Choose one

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

(2) PRACTICAL REQUIREMENTS

Clarity and fulfillment of the aims	0-3	3
Ability to understand the results, their interpretation, and clarity of the results, discussion, and conclusions	0-3	3
Discussion quality – interpretation of the results and their discussion with the literature (absence of discussion with the literature is not acceptable)	0-3	3
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
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	3
Practical requirements – points in total		27
POINTS IN TOTAL (MAX/AWARDED)	48	(47)²

Comments of the reviewer on the student and the thesis:

Overall the research was carefully designed, performed and thoroughly written which reader can easily follow. Taking in the consideration of the time limitation e.g. not being able to repeat some experiments and other experimental difficulties, wrapping up the topic and the take home message of the thesis was very clear. However, there are some points which needs to be mentioned in the following “Corrections and Suggestions” section.

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

Mistakes, which the students should avoid in the future:

Questions:

- 1- What are the functions of plasmids in organisms?
- 2- Why we need GFP to monitor gene expression? What are the benefits of using GFP than monitoring gene expression with other traditional methods?
- 3- Could student please tell what the other applications of GFP are?
- 4- Are there any impacts of adding GFP to a gene of interest in terms of expression?
- 5- What are the advantages and disadvantages of transposon mutagenesis?

² Enter the number of points awarded.

Corrections and Suggestions:

- 1- Figure 1 and Figure 2 were not cited in the text.
- 2- Some terms were not written in their correct form which needs to be more cared for the future e.g. Section 3.1.: $10_7 \rightarrow 10^7$, or in Table 1: $H_2O \rightarrow H_2O$
- 3- As “Conclusion” section is recommended in the document of “Recommendations for Bachelor and Master Theses writing at the Institute of Chemistry, Faculty of Science, University of South Bohemia”, in section 2.1 and 2.7, the “Conclusion” could have been separately included as well.
- 4- Even if the entire experiments were done by Mr. Weber, I personally do not find usage of “personal pronoun” e.g. “I”, “her” in theses scientifically correct. Therefore, I kindly recommend to avoid using them where possible.

Conclusion:

In conclusion,

I recommend the thesis for the defense and I suggest the grade 1.³

In Giessen, Germany date 23.07.2020

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).