



Přirodovědecká
fakulta
Faculty
of Science

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

STATEMENT OF THE BACHELOR/DIPLOMA* THESIS REVIEWER

Name of the student: Paul Strasser

Thesis title: Warburg effect in lymph gland of *Drosophila melanogaster* upon parasitoid wasp infection

Supervisor: Mgr. Tomáš Doležal, Ph.D.

Reviewer: Mgr. Lenka Veselovská, Ph.D.

Reviewer's affiliation: University of South Bohemia, Department of Molecular Biology and Genetics

	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	2.5
quality of the theoretical part (review) (number and relevancy of the references, recency of the references)	0-3	2.5
Accuracy in citing of the references (presence of uncited sources, uniform style of the references, use of correct journal titles and abbreviations)	0-3	2.5
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	1.5
Formal requirements – points in total		18
(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	2.5
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

* Choose one

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

Completeness of the description of the used techniques	0-3	3
Experimental difficulty of the thesis, independence in experimental work	0-3	2.5
Quality of experimental data presentation	0-3	3
The use of up-to-date techniques	0-3	2.5
Contribution of the thesis to the knowledge in the field and possibility to publish the results (after eventual supplementary experiments)	0-3	2.5
Formal requirements – points in total		24
POINTS IN TOTAL (MAX/AWARDED)		
	48	42²

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

1. Can the developed method be used to measure anything else, either related or unrelated to the project? Does it have a potential use for researchers working in a different field?
2. Why is it important or interesting for science to study aerobic glycolysis in immune cells?
3. Please explain and discuss the figure 6. What is known and what is unknown?
4. Why the inosine experiment did not work? What result did you expect?

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

1. The introduction is missing information about why the topic is interesting/important and what is the contribution of the project on a bigger scale (Why is it important to get these results? How it will contribute to the field?)
2. Figure 1 - the figure needs explanation (brief description) of each subfigure in the legend, or should refer to the main text.
3. Figure 2 - Hml, Msn and DIC should be explained
4. Figure 3 - Unit of lactate concentration is missing, and the boxplot should be explained (what is the middle lane -median?, what is boxplot - quartiles?, what are whiskers?)
5. Figure 6 - the figure needs explanation, either in the legend or in the main text. The mentioned further targets of investigation should be listed in figure legend/main text.
6. The section about the life of Otto H. Warburg is not necessary
7. The section 2.5 (Adenosine as a signal for immune response) is not clear, especially the description of the metabolic switch.
8. Most of the first paragraph (and the description of statistics done in R from second paragraph) from Results section should be in Methods section.
9. Section 5 Method development could be a part of Results, as two of the aims of the project were to develop a method.
10. For better clarity, the section Results could be split into several subchapters corresponding to the aims, such as 1. Development of method for lactate measurement, 2. Development of method for adenosine and inosine measurement, 3. Measurement of lactate, 4. Measurement of adenosine/inosine.
11. Results section, second paragraph - when showing value±value, describe what it is (standard error?).

² Enter the number of points awarded.

12. When referring to an attachment in the text, the number of the attachment should be referenced (it is sometimes missing, such as the top paragraph on page 14).
13. More information about the inosine experiment/data would be beneficial - it is not clear what "no continuous explanation of the results was possible" means.
14. When using not obvious abbreviations, the full wording should be used (such as GC-MS)
15. Discussion could be much improved by these:
 - discussing inosine experiment
 - describing the benefits of the novel developed technique, comparing it with existing techniques and discussing the potential of the technique to be used by researchers in a different field etc.
 - describing and discussing the potential disadvantages and weaknesses of the developed technique
 - adding more ideas for future experiments, for which the existing project could be a starting point
 - detailed description of the figure 6, listing and discussing the pathways and targets of future investigation
16. Some references from the list of references and problematic:
 - number 12 - the type of the reference should be indicated, if it is a journal manuscript, information about year, journal and pages is missing
 - number 17 - extra question marks in the name of the author
 - number 20 - the reference has different format than other references
17. List of attachments is missing (containing numbers and names of attachments)

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

Conclusion:

In conclusion, I

r e c o m m e n d *

the thesis for the defense and I suggest the grade 1 .³

In České Budějovice date 6.9.2016


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signature

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.