



Přírodovědecká
fakulta
Faculty
of Science

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

STATEMENT OF THE BACHELOR THESIS REVIEWER

Name of the student: Magdalena ŠeffEROVÁ

Thesis title: The impact of antidepressant (sertraline) on *Daphnia magna* life-history traits under different food levels

Supervisor: Mgr. Jana ZemanOVÁ

Reviewer: doc. Ing. Tomáš Randák, Ph.D.

Reviewer's affiliation: University of South Bohemia in Ceske Budejovice, Faculty of Fisheries and Protection of Waters

Point scale¹ 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 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 3

Formal requirements – points in total

20

(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

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 2

Completeness of the description of the used techniques

0-3 3

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

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	2
Contribution of the thesis to the knowledge in the field and possibility to publish the results (after eventual supplementary experiments)	0-3	2
Practical requirements – points in total		23

POINTS IN TOTAL (MAX/AWARDED)

48

43

Comments of the reviewer on the student and the thesis:

This bachelor thesis deals with the current issue of the influence of human antidepressants present in the aquatic environment on aquatic organisms. The experimental part was focused on the evaluation of the chronic toxicity of sertraline on life-history traits of *Daphnia magna* under high and low food levels. The aims and hypothesis of the work are well formulated. The “Literature review” part contains relevant citations related to the topic of the work. The experiments were from the point of view of the defined objectives well designed. I miss only analytical check of the tested sertraline concentrations. The measuring of real concentrations of tested compounds in toxicological testing is necessary for publication of obtained results in good scientific journals. And, in the case of sertraline, this is double, because its concentration in water is rapidly decreasing due to its absorption into organic matter and biota. The results are presented clearly including graphs and tables. The discussion is well done and relates to the obtained results. The conclusions are consistent with the obtained data. I have to note that the presented work is processed at a high level and brings very interesting new knowledge about the potential effects of antidepressant residues in the aquatic environment. The study has a potential for publication in some scientific journal. I recommend the bachelor thesis for the defense.

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

Why were not the tested sertraline concentrations checked analytically?

It is known that antidepressants affect the nervous system of exposed organisms and their behavior. It would be very interesting to focus your future research in this direction (e.g. studies focused on comparison of behavior of exposed and non-exposed *D. m.* under different natural stress factors.

Conclusion:

In conclusion, I
r e c o m m e n d

the thesis for the defense and I suggest the grade 1 (excellent).²

In date 2.6.2017



signature

² 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.