



SUPERVISOR'S STATEMENT ON BACHELOR THESIS

Name of the student: Maximillian Kropf
Study program: Biological Chemistry
Department/Institute: Institute of Entomology, Department of Biochemistry and Physiology
Thesis title: Studies on the toxicity of glyphosate and the effect of spermidine in conferring resistance to induced toxicity in *Drosophila melanogaster*

Supervisor: RNDr. Andrea Bednářová, Ph.D.
Supervisor's affiliation: Biology Centre of the Czech Academy of Sciences, Institute of Entomology, Department of Biochemistry and Physiology, Laboratory of Insect Physiology

	Point scale ¹	Points
(1) FORMAL REQUIREMENTS		
Formal and graphical quality of the thesis	0-3	3
Ability to work with literature	0-3	3
Language and stylistics	0-3	3
Formal requirements - points in total		9
(2) PRACTICAL REQUIREMENTS		
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 results and their discussion with the literature	0-3	3
Experimental difficulty of the thesis, independence in experimental work	0-3	3
Contribution of the thesis to the knowledge in the field and the possibility to publish the results (after eventual supplementary experiments)	0-3	3
Practical requirements - points in total		14
POINTS IN TOTAL (MAX/AWARDED)	24	(23-24)²

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

² Enter the number of points awarded.

Comments of the supervisor on the student and the thesis:

Maximillian Kropf undertook a challenging topic to work on his Bachelor's thesis under my supervision. To his credit, I must admit that Maximillian proved to be capable of handling this task and I must commend him for his hard work and perseverance in methodically working through the various experimental procedures to accomplish his thesis work. While the results were largely negative (we did not confirm negative or deleterious effect of glyphosate on physiological parameters of *Drosophila melanogaster* per se, neither spermidine was proven to play a protective role), they are very important for the subsequent studies. Based on the results, Maximillian was able to generate, future studies can employ more targeted approach towards studies on chemicals such as glyphosate but also focus on the role of surfactants and other chemicals which may likely have a synergistic effect.

In brief, Maximillian has demonstrated the ability to work independently on this project, starting from a survey of literature to conducting experiments and at times refining them and finally discussing the results in a judicious manner in the light of other studies. Given his enthusiasm and dedication, I am positive that Maximillian will progress towards making significant contributions to science if he chooses research as a career path.

The results of the thesis do raise some very pertinent questions the work of other authors who have also used glyphosate and reported on its negative effects. In order to fully investigate the deleterious effects of glyphosate it is also necessary to understand and test other ingredients in its final commercial formulation since that is the one that ultimately may prove to be a safety hazard for non-target organisms including humans.

Conclusion:

In conclusion, I recommend the thesis for the defense.

In Ceske Budejovice, date 12/10/2018



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