



Přírodovědecká
fakulta
Faculty
of Science

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

SUPERVISOR'S STATEMENT ON BACHELOR/DIPLOMA* THESIS

Name of the student: Tobias Lernhardt

Study program: Biological Chemistry

Department/Institute: Dpt. Chemistry, Faculty of Science, University of South Bohemia

Thesis title: The Effect of Ploidy on the Brain Cellular Composition of Sterlet Fish

Supervisor: Mgr. Pavel Němec, Ph.D.

Supervisor's affiliation: Dpt. Zoology, Faculty of Science, Charles University

	Point scale ¹	Points
(1) FORMAL REQUIREMENTS		
Formal and graphical quality of the thesis	0-3	3
Ability to work with literature	0-3	2
Language and stylistics	0-3	3
Formal requirements – points in total		8
(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	2
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	2
Practical requirements – points in total		12
POINTS IN TOTAL (MAX/AWARDED)		
	24	(20)²

* Choose one

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:

The submitted thesis is part of a larger project, the goal of which is to test the potential effect of genome size on the number and density of neurons in the central nervous system. To do so, we established cooperation with Dr. Vojtěch Kašpar and prof. Martin Flajšhans (University of South Bohemia in České Budějovice, Faculty of Fisheries and Protection of Waters), who experimentally prepared diploid and triploid individuals of the sterlet (*Acipenser ruthenus*) for us. These were subsequently reared in standard conditions. The number and density of neurons and glial cells was determined by the isotropic fractionator in several cohorts of fish. One of them was analyzed by Tobias Lernhardt as part of his bachelor's thesis.

I leave the detailed assessment of the submitted work to the opponent. I will limit myself to a short comment regarding the student's approach to the preparation of the bachelor's thesis. Tobias Lernhardt participated in the collection of samples, which he subsequently processed. After a short (approx. three-week) training in the methodology of isotropic fractionation, Tobias moved with the samples to the University of South Bohemia and further processed the samples in the laboratory of Dr. Adam Bajgar. Tobias is highly motivated, he carried out laboratory work independently, and he also wrote his bachelor's thesis without much intervention from the supervisor. I am generally satisfied with the thesis, although the results achieved will have to be verified on a larger sample of fish from other age categories. The formal quality of the work is of a decent standard. Tobias devotes too much space to some methodological aspects of the work, on the other hand, other passages of the work could be more extensive (e.g., discussion). Nevertheless, the work undoubtedly meets the requirements for a bachelor's thesis and I warmly recommend it for the defense.

Conclusion:

In conclusion, I

r e c o m m e n d

the thesis for the defense and suggest the grade 2.

In Prague date **26.9.2023**



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signature