Opponent's Review on Master Thesis

Faculty:	Faculty of Fisheries and Protection of Waters
Institute:	Research Institute of Fish Culture and Hydrobiology
Student:	Ege Güngör
Branch of Study:	I dont know
Title of the Thesis:	Isolation of early stages of germ cells in pikeperch
Opponent of the Thesis:	Karel Janko
Opponent´s occupation:	Evolutionary biology

Thesis assessment:

Topic selection and significance of the thesis: (2) Appropriate and significant topic

Comment: In my view, the topic addresses practically important issue of accessibility of germ cells of potentially commercially valuable fish species that may be very useful in conservation management as well as in fish production.

Formulation of the Thesis Objectives: (4) Objectives only partially formulated

Comment: I find this a bit problematic: the topic has been well defined prior to the thesis elaboration. Such definition of research aims has been copy-scanned into the thesis at the very beginning. However, I believe that the student should formulate himself the thesis aims, hypothesis and expectations at the very body of the text. This should be done either as a self-standing chapter or at the end of the Introduction section. I didn't find it to be the case here.

Processing Method: (2) Appropriately chosen and formulated

Comment: I found the methods adequate to the research aim.

Data and Information Application: (1) Used data are current, information relevant and correctly applied

Comment: No comment

General Approach to the Solution: (1) Absolutely correct approach to the solution

Comment: No comment

Author´s Theoretical Background: (1) The author quoted significant authors and knows the theory of the issue

Comment: I appreciate the high amount of literature that the student reviewed in the introduction of the thesis. Well done!

Work with Professional Literature (Quotations, Standard): (3) The author complied with the quotation standard but made several mistakes

Comment: I noticed two places where the author did not quote adequately the literature source and I consider it worth mentioning: second half of the second paragraph at page 15 is almost identical copy of the text from Hashimoto et al. 2004 Dev.Biol. The original source of the text is referred at the end of the paragraph, but this is not appropriate way how to treat exact citations. If the author is not able or does not want to formulate this part of the text in his own words, than he should clearly quote the copied text into "…". Similarly, on the next page, second part of the first paragraph seems copied from Brat et al. 1999 (note that the source is referred to in the next paragraph only). Again, the author should avoid such way of citing other papers or should quote it directly into quotation marks. Otherwise, I found the quotations were appropriate and the author apparently has read large body of scientific literature.

Language Level: (1) Language level of the thesis is absolutely adequate

Comment: very nice language

Accuracy of the Formulations and Work with Professional Language: (1) The author knows extensive terminology and is perfectly able to use it

Comment: No comment

Formal Arrangement – General Impression: (3) There are several small formal mistakes in the thesis

Comment: As I stated above, there were two formal issues I found, otherwise my impression is very good.

Satisfaction of the Thesis Objectives: (2) The thesis objectives have been satisfied including the partial ones

Comment: In my view, the author has accomplished all objectives of the thesis

Conclusion Statement: (2) The conclusion is well stated and significant for further use

Comment: No comment

Professional Contribution of the Thesis and its Practical Application: (2) The thesis is well applicable in professional and practical terms

Comment: Just because the thesis concerns practically valuable fish species, I am certain that it will provide first necessary step in the application process of PGC transplantation.

Rating and Recommendation

Recommended rating of the thesis: Very good

I recommend the thesis for defense: YES

Questions for the Defense

Question 1: The author mentions that during the vitellogenesis the oocyte also accumulates maternal RNA. This is highly debated topic recently, so I wonder whether the author may tell a bit more about what he knows about the type of RNA molecules being donated from maternal body into the oocyte. Specifically, I would like to ask the author about how such a transfer may affect the development of chimeric individuals, which would acquire PC from one species onto the somatic background of the other species.

Further Comments, Opinions and Suggestions for the Defense or for Further Application of the Thesis:

The author criticized the flow cytometry method for estimating the proportion of early stage spermatogonia as it gave different results from random square counting method. May the author expand more upon the strengths and weaknesses of both methods? Is it theoretically possible that histological examination may be 'trapped' into some specific part of the gonad, where the proportion of cell types could be different from whole-gonad average? If so, may the FC give more unbiased estimate?

Date: 29. 05. 2015 ***Signature of the Thesis Opponent:***