



Confidential

Supervisor's Review of USB RIFCH PhD Thesis

Surname of the PhD student: M.Sc. Anna Shaliutina	Name of supervisor: Prof. Dipl. - Ing. Otomar Linhart, DSc.
Title of PhD thesis: Fish sperm motility parameters and total proteins in seminal plasma during <i>in vivo</i> and <i>in vitro</i> storage	

OVERALL COMMENTARY ON THE PhD THESIS

She was an active student with excellent publication level of PhD study (2010-2013) mostly in my and later in Martin Psenicka's laboratory. We invited Anna with Boris Dzyuba, Martin Hulak and Li Ping to join our group for further cooperation and to continue study of proteomics, what had introduced two years ago Li Ping with Martin Hulak. Upon coming to our faculty and laboratory as the second/third student from Ukraine in Vodnany, she started to develop a study of *in vitro* and *in vivo* storage of sperm in different fish species. She studied influence of sperm storage on sperm motility, DNA integrity, antioxidant defensive system and seminal plasma protein composition. She provided new data on sperm quality and quantity parameters of chondrosteian and teleost fish species with respect to *in vivo* and *in vitro* storage capacities. Likewise she confirmed that protein patterns in seminal plasma varies during *in vitro* storage according on time of sperm collection. Furthermore, she observed that the altered proteins are probably regulated sperm movement above enzymatic systems. She also suggested that application of antioxidant during *in vitro* storage of sturgeon sperm prevent cellular injuries caused by oxidative stress. Finally, she investigated theory that sequential stripping of sperm combined with spermatozoa cryopreservation would be a way to improve the efficiency of sturgeon male exploitation in aquaculture.

Her creativity and activity in laboratory have risen exponentially from last time of the second year study, especially within her stay in laboratories of Andrzej Ciereszko in Poland and Kazuo Inaba in Japan. She has published as the first author more than 5 peer-reviewed papers and as coauthor 6 more papers. Her papers have citation level around 1, without self-citations, with h-index 1. The positive is that Anna received a one-year postdock position in the laboratory of Igor Babiak in Norway.

Last but not least, **during four years with us "Anna" expressed herself and matured as an excellent and professional scientist** who is able to express her self, enjoying life, including science as important job for her. I understood that she will be able to accomplish outstanding results in the good teams anywhere on the world in the near future.

FINAL RECOMMENDATION

- can be recommended for defence of PhD Thesis
 can be recommended with reservations for defence of PhD Thesis
 can not be recommended for defence of PhD Thesis

Vodňany, 30th June, 2013

Otomar Linhart

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Date and place

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surname and signature