



**Confidential**

## **Supervisor's Review of USB RIFCH PhD Thesis**

Surname of the PhD student: Viktor W. Švinger

Name of supervisor: Jan Kouřil

Title of PhD thesis: Optimization of Hormone-Induced Ovulation in Economically Important Fish Species

### **OVERALL COMMENTARY ON THE PhD THESIS**

Field of artificial propagation of fish belongs to kinds of research which are long-term developed in Research Institute of Fish Culture and Hydrobiology in Vodňany. Dipl.-Ing Viktor W. Švinger has started his Ph.D. study in October 2010. Aims of his work were to elaborate literary background research of reproduction of salmonids fishes. I characterize him as a hardworking and purposeful, perhaps too diffident student. During realization of experiment he has shown observation talent and considerable laboratory skill. He participated or training at experimental fish farms in Russia, Germany and Norway. He is skilful in use of statistical methods with good English and Germany language knowledge.

The PhD work was supported by research projects CENAKVA CZ.1.05/2.1.00/01.0024 – South Bohemian Research Center of Aquaculture and Biodiversity of Hydrocenoses (project leader prof. Dipl.-Ing. Otomar Linhart, DSc.), ME 10126 – Environmental and hormonal stimulation of reproduction, anesthesia, ontogeny and rearing of endangered, and commercially important fish species (project leader prof. Dipl.-Ing. Jan Kouřil, Ph.D.), NAZV QH91310 – Optimization of methods of hormonal induction of ovulation in commercially important fish species (project leader prof. Dipl.-Ing. Jan Kouřil, Ph.D.), CZ.1.25/3.4.00/10.00314 – Examination of technology of hormonal synchronization of ovulation in salmonids (project leader prof. Dipl.-Ing. Jan Kouřil, Ph.D.), in Grant agency of the University of South Bohemia 025/2011/Z Freund's incomplete adjuvant as GnRH<sub>a</sub> carrier in artificial reproduction of northern whitefish (*Coregonus peled*) (project leader Dipl.-Ing. Viktor Švinger) and 047/2010/Z Breeding and environmental aspects of aquaculture and hydrocenoses (project leader. Assoc. Prof. Dipl.-Ing. Martin Flajšhans, Dr. rer. agr.).

His Ph.D. thesis consists of set of research papers, supplemented by general introduction and general discussion part. Author included into his thesis experiments focused on comparison of the effects of GnRH analogues on synchronization of ovulation and egg quality in brook char, brook trout, rainbow trout, arctic grayling and northern whitefish. Above mentioned activities of Dipl.-Ing. Viktor W. Švinger demonstrate his ability to formulate scientific hypothesis, prepare, conduct and statistically evaluate experiments. Obtained results have been published in scientific journals with impact factor. In addition his results were presented on several scientific conferences and Ph.D seminars in RIFCH. Dipl.-Ing. Viktor W. Švinger have passed the state exam in planned term and conducted all others requirements including internships and pedagogic practice. All requisite presumptions have been fulfilled for correct finalization of his Ph.D. studies assessed by internal regulations RIFCH.

Therefore, I am recommending presented Ph.D. thesis „Optimization of Hormone-Induced Ovulation in Economically Important Fish Species" for defence with pleasure.

### **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

15.06.2013

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Date and place

Jan Kouřil

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surname and signature