



Confidential

Supervisor's Review of USB RIFCH PhD Thesis

Surname of the PhD student: Linhartová	Name of supervisor: Sabine Sampels
Title of PhD thesis: Effects of xenobiotics on oxidative stress, lipid metabolism, DNA integrity and cell viability in human cells and fish spermatozoa in vitro	

OVERALL COMMENTARY ON THE PhD THESIS

The thesis consists of two parts: One was to evaluate how the consumption of heavy metal contaminated fish affects viability and lipid metabolism in human liver cells as a model. The second part evaluates the effects of contaminants in the aquatic environment on fish spermatozoa. Pollution of the aquatic environment and its effect on both the fish living in the environment and the human as fish consumer are a major topic in public and research nowadays. Spermatozoa of almost all fish species are released into water environment where they can be directly exposed to various compounds and hence Pollution threatens the survival of aquatic organisms including fish. In addition balancing risks and benefits of fish consumption is nowadays an intensively discussed public health topic. Therefore the topic of the thesis is in the trend and needs of the time and very up to date.

The thesis shows clearly that the chosen substances decrease viability parameters and create oxidative stress and but also for the human hepatocytes that long chain n-3FA which are normally ingested with the fish, can protect against some of the toxic effects.

The thesis is clearly written and there is a clear rationale and Pavla Linhartová managed to discuss and summarize the aims and results of her work well. The different parts of the work fit well together and the design of the studies is good. Pavla Linhartová also managed to fit the single parts of her work into a wider picture and to interconnect the meaning of the different results.

I recommend the thesis for defense.

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

22.04.2016 Česká Budějovice

Date and place

Sabine Sampels

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surname and signature