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Confidential

Supervisor's Review of USB RIFCH PhD Thesis

Surname of the PhD student: Mráz	Name of supervisor: Jana Pickova
Title of PhD thesis: Improvement of fatty acid composition in common carp (<i>Cyprinus carpio</i>)	

OVERALL COMMENTARY ON THE PhD THESIS

The overall aim of this thesis was to evaluate factors influencing lipid content and composition in common carp muscle. This work is a part of a bigger project focused on improvement of carp muscle lipid quality in order to be used as a local healthy product for prevention and treatment of cardiovascular diseases. The goal is to develop a technology of carp culture with using long term sustainable alternative feedstuffs.

The specific objectives were focused firstly on investigation of lipid content, lipid classes and fatty acid composition in three parts of common carp fillets and examination of the effect of genetic origin on lipid content and fatty acid composition in common carp. Second objective was to examine whether the lipid composition of common carp muscle can be improved by different rearing strategy in ponds and become an important source of n-3 highly unsaturated fatty acids in human nutrition. The third objective was to study the effects of bioactive compound sesamin on common carp fatty acid composition and global gene expression *in vivo*. The fourth objective was to screen and *in vitro* evaluate the effects of other bioactive compounds with potential to influence lipid composition. A core part of experiments have been done on common carp which is one of the most cultured fish species worldwide and the results are of a high interest both for the scientific community as well as for the fish farmers and public.

Jan Mráz is a very good student and his ability to work independently as well as in team is very good. He is always well seen among his colleagues as a helpful and social person. His personal qualities and qualities as scientist are well suited for a scientific carrier. Therefore I can highly recommend him for the defence of his PhD thesis.

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

20.5.2011 Lippsova
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Date and place

Pickova
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surname and signature