

Confidential**Review of USB RIFCH PhD Thesis**

Surname of the PhD student: MVDr. Eliška Sudová	Name of supervisor: prof. MVDr. Zdeňka Svobodová, DrSc.
Title of PhD thesis: Pharmacovigilance in aquaculture with attention to antibiotics and antiparasitics	
REVIEWER:	
Surname: Navrátil	Institution: University of Veterinary and Pharmaceutical Sciences
Name: Stanislav	
Titles: doc., MVDr., CSc.	E-mail: navratils@vfu.cz
Please describe your professional relationship to the PhD student: I know the PhD student from the university and some conferences, but I am not cooperating with her now.	Please describe your field of expertise: Diseases of fish and bees.

QUESTIONNAIRE***Originality, scientific importance, prospects of the PhD thesis and benefits for basic or applied research***

Evaluate its competitiveness in the international context and compare its level with the current state of the art in the field:

Aquaculture is a very important branch of agriculture. The protection of fish against diseases and pests by veterinary drugs is a very important part of health care. Veterinary drugs can stabilize health status of fish and control different fish diseases, but they can also represent a serious risk for the environment, other aquatic animals and for consumers. The submitted thesis assesses therapeutical effects and hazards of the use of these drugs. Very important is the selection of investigated drugs. From this point of view the item of the submitted thesis "Pharmacovigilance in aquaculture with attention to antibiotics and antiparasitics" is well-taken and very topical.

Preparation of the PhD thesis, targets of the work and deliverables

Evaluate the overall level of preparation of the PhD thesis and the originality of the selected approaches; evaluate publications and whether the targets set in the PhD thesis correspond with the declared purpose of the thesis:

The submitted study is written as a collection of four published, accepted or submitted papers in scientific journals with impact factor. The review of references corresponds with needs of the study and contains all necessary data for the orientation in problems. Methods of the investigation were well-taken and standard. All used methods are very well described and make repetition possible. Results of all investigations are very valuable and extend the current knowledge on the influence of some veterinary drugs to the pond environment, health status of fish and hazards for consumers.

OVERALL COMMENTARY ON THE PhD THESIS**Please write comments:**

Aquaculture is a very important branch of agriculture. The protection of fish against diseases and pests by veterinary drugs is very important part of health care. Veterinary drugs can stabilize health status of fish and control different fish diseases, but they can also represent a serious risk for the environment, other aquatic animals and for consumers. The submitted thesis assesses therapeutical effects and hazards of the use of these drugs. Very important is the selection of investigated drugs. From this point of view the item of the submitted thesis "Pharmacovigilance in aquaculture with attention to antibiotics and antiparasitics" is well-taken and very topical.

The submitted study is written as a collection of four published, accepted or submitted papers in scientific journals with impact factor. The study is completed with special subchapters of general introduction, general discussion, English and Czech summaries, acknowledgements, list of publications, training and supervisors plan during study and curriculum vitae. It has 78 pages. The whole study is carefully written with minimum of formal imperfections. I have a critical note on the division of the study. I think that better division of these subchapters is the division to chapters. In my opinion, a separate chapter of conclusion is lacking.

The general introduction is the first part of chapter one and makes the reason of investigation clear and presents aims of the study. The aims are summarised in six points. The first aim was to better understand the issues related to pharmacovigilance of dangerous preparations as malachite green. The second aim was to assess some effects of praziquantel on the common carp. Next aims were directed to determinate the influence of praziquantel doses on the organism's response, the efficacy of praziquantel, and to describe the position of tapeworms in the gut of the carp. The last aim was to investigate the effects of oxytetracycline on pond ecosystem and health of the carp. On the basis of the evaluation of the results it is possible to state that all the above-mentioned points were realised.

The review of references corresponds with needs of the study and contains all necessary data for the orientation in problems.

Methods of the investigation were well-taken and standard. All used methods are very well described.

Results of all investigations are very valuable and extend the current knowledge on the influence of some veterinary drugs to the pond environment, health status of fish and hazards for consumers. The results of all papers are well supplemented by tables and figures. The obtained results are discussed with appropriate literature sources.

Unfortunately, there is no conclusions chapter. In my opinion, practical recommendations are also lacking.

The summary briefly repeats the results.

I have the following notes or questions:

1. What is the current situation of the use of malachite green in the Czech Republic?
2. Will be the results of the effect of praziquantel used for the purpose of the registration of this drug for fish?
3. What explications and recommendations for the practice result from the study?

The submitted study is carefully made and witnesses the high professional and scientific level of the aspirant and brings new knowledge about effects of some drugs used for the treatment of fish diseases. The presented study fulfils requirements for Ph.D. thesis and therefore I **recommend** it for the defence and after it I **agree** with the conferment of the degree "Doctor".

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

10th July, 2009, Brno

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Date and place

Stanislav Navrátil

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surname and signature