



Confidential

Supervisor's Review of USB RIFCH PhD Thesis

Surname of the PhD student: Golshan	Name of supervisor: Prof. Otomar Linhart
Title of PhD thesis: Environmental Contaminant and Endocrine Associated Male Infertility in Fish	

OVERALL COMMENTARY ON THE PhD THESIS

During four years of his PhD study (2011-2015) in the Laboratory of Reproductive Physiology and Laboratory of Germ Cells he was an active student. Mahdi chose based on an agreement with former supervisor Hadi Alavi, PhD. interesting and current topic, which partially followed the study Azadeh Hatf, PhD from 2009-2012. The aquatic ecosystem is at greatest risk from pollutant; since most chemicals will reach water anywhere as the final repository and therefore, it is important to study effect of pollutant on fish and both on males and females. The focus of the study is to all current as also evidenced today in industrialized countries, reflected in an increase in the number of infertile couples. Similar to humans, frequent evidences shows trends in male reproductive infertility in fish from wildlife.

His thesis provides new information to understand mechanisms by which vinclozolin (VZ) and Di-(2-ethylhexyl)-phthalate (DEHP) disrupt neuroendocrine and endocrine regulation of reproduction in goldfish following an acute and chronic exposure. As he mentioned in his thesis conclusions DEHP and VZ reduced sperm quality in goldfish due to stimulation and inhibition of 11-KT production which were mediated by alternations in pituitary function to produce LH or by disruption of the transfer of Cholesterol to steroidogenesis. He discovered the fact that upstream neuroendocrine regulators (*gnrh3* and *kiss-1/gpr54*) were disrupted in VZ treated by goldfish. Taken together, VZ and DEHP differentially act on brain and testis to impair male fertility endpoints.

I'm his supervisor since September 2014 and from that time I realized that Mahdi is very an independent student, who knows what he wants to achieve. This fact is evidenced by its publications, internships in prestigious laboratories and lectures at conferences. Without his creativity and simplicity for this field of science, our lab would never reach today's level. He published, as the first author, more than 2 peer-reviewed papers (two published and one in process) and as coauthor 2 more papers. His papers have citation level around 14, without self-citations, with h-index 2. He was also involved in studies or research activities in laboratory, which have not been included in his thesis. Last but not least, **Mahdi is an excellent and creative scientist** who is fully enjoying life including science as pleasure. I understand that he is able to discover outstanding results in 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 4th May, 2015

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Date and place

Otomar Linhart

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surname and signature