Cairo University

Faculty of Veterinary Medicine

Dept. of Microbiology

Microbiological Profile of Stressed Fish by Different Heavy Metals Pollution of Water

A Thesis Presented

By

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(B.V.Sc, Cairo University 2003)

Diploma in Microbiology (2006)

For the Master Degree

In Veterinary Medical Science

Microbiology

(Bacteriology, Immunology and Mycology)

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2015

CAIRO UNIVERSITY
Faculty of Vet. Medicine
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APPROVAL SHEET

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Abstract

Randomly 100 natural reared *Tilapia* samples were collected from River Nile tributaries , (El harania , Aysh Sakarah, EL Haram street, Gezeret bein El bahreen, Gezeret El Korsa, El Otobis El Nahry Moneeb), Giza Egypt .some examined fish showed erosion of tail and fin (Tail and fin rot) heamorrhages of body parts. The target organs for isolation was liver, kidney and blood
Morphological and biochemical identification of bacterial isolates by using VITEK 2 (BIOMERIEUX) and BiOLOG (MicroStation™ System/MicroLog)**:** revealed *Enterococcus faecium, Enterococcus casseliflavus, Staphylococcus warneri, S. lentus, S. arlettea, S. xylosus, S. heamolyticus, S. gallinarum, Pseudomonas luteola, Pseudomonas putida, Aeromonas bio var sobria and Aeromonas hydrophila*.
-Histopathologically collected samples were liver, kidney and spleen. congestion of central vein and hepatic sinusoids and showing fatty change of hepatocytes, fusion of gill lamellae associated with inflammatory cells infiltration showing focal necrosis of gill, spleen showing hemorrhage and haemosiderosis and focal melanin carrying cells for Water sample examination for heavy metal pollution (Cadmium-Lead-Cupper-Zinc) for Oxidative STRESS RESPONSE TEST for fish samples (liver) to Determination of malondialdehyde, superoxide dismutase, Glutathione peroxidase, and reduced glutathione there is significant increases in all enzyme and that proved heavy metals pollution. And for DNA fragmentation Assay there was fragmented.
(Key words: *Tilapia Nilotica* - River Nile – Bacterial isolates – heavy metals pollution–Oxidative response test-DNA fragmentation)

Dedication
to

My father's sole

My loving & caring Mother

My Brothers

And

My Best Friends

Acknowledgment

Firstly and for most, my deepest thanks to ***Allah*** who gives us everything and showing us the right path.

I would like to express my deep gratitude to my supervisor

Prof. Dr. Nashwa Abd El Salam, Professor of microbiology Faculty of Vet. Med., Cairo University, for here supervising, and planning of the work, encouragement, great help and valuable advice during the course of this work.

I have no adequate words to express my thanks and gratitude for the close supervision, guidance, active participation and kind encouragement of

Prof. Dr. Mai El Desoky El said Ibrahem, Professor of fish Diseases and Management, Faculty of Vet. Med., Cairo University.

My sincere thanks and gratefulness to ***prof. Dr. Kawkab Abdel Aziz Ahmed*** prof. of pathology Department of pathology, Faculty of Vet. Med., Cairo University.

Iam very thankful to ***prof. Dr . Marwa Ibrahim Abdel-Hamid*** prof .of Biochemistry and chemistry of nutrition, Faculty of Vet. Med., Cairo University.

Iam very thankful to ***Dr. Mahmoud El-Hariri*** Assistant Prof. of microbiology Faculty of Vet. Med., Cairo University, for his valuable advice and unfailing cooperation for this work.

I would like also to thank all members of Microbiology department, Fish diseases and Management and Biochemistry department, Faculty of Vet. Med., Cairo University for their helps and support in this work.

My thanks extended to my friends for their kind advice and help.

Grateful acknowledgement and thanks to my family for their endless love, trust, encouragement, and support throughout my life.

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