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Faculty of Veterinary Medicine

Dept. of Microbiology

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

A Thesis Presented

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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. heamoliticus*, *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-Copper-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

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CONTENTS

Title	page
1. Introduction.....	1
2. Review of literature.....	4
2.1.1. Microbiological studies on Fish.....	4
2.1.2. Most common Gram-Negative bacteria isolated from fresh water fish... ..	6
2.1.2.1. Aeromonadaceae:.....	7
2.1.2.2. Pseudomoniasis:.....	19
2.1.3.1. Streptococcosis and staphylococcosis:.....	29
2.2. Fish and Pollution Relationship:.....	47
2.3. Heavy metal pollution and Oxidative stress markers:.....	62
2.4. DNA Fragmentation:.....	80
3. Material and Methods.....	88
3.1. Material.....	88
3.2. Methods.....	96
4- Results.....	109
4.1. Role of some ecological factors on prevalence of different bacteria In fish.....	109

4.2. Clinical and Postmortem findings of examined <i>Tilapia Nilotica</i>...	112
4.3. Prevalence of Bacterial Isolates from Examined <i>Tilapia Nilotica</i>...	114
4.4. Result of Bacterial Isolates from Examined <i>Tilapia Nilotica</i> by using VITEK 2 and BiOLOG.....	117
4.5. Results of Prevalence of different bacterial isolates according to VITEK 2 and BiOLOG.....	125
4.6. Oxidative stress response test.....	127
4.7. DNA fragmentation.....	130
4.8. Histopathological examination.....	130
5-Discussion:.....	142
6- Summary:.....	153
7-Refrances:.....	155
8-Arabic summary:.....	

LIST OF FIGURES

Number		Pages
1a	Rosetta branch and its drain locations (Source of polluted water).	50
1b	Showing River Nile Map in Egypt.	51
2	Heavy Metals Values in water samples collected from River Nile.	111
3	Microbiological examination of water samples collected from River Nile.	112
4	<i>Tilapia Nilotica</i> showing dark discoloration of body, Hemorrhage in isthmus, Tail and fin rot.	113
5	<i>Tilapia Nilotica</i> showing congestion and heamorrhage in the internal organ.	114
6	Pink colony to dark red in the center of the colony on Slanetz& Bartley Medium of <i>Enterococcus</i> spp.	115
7	Microscopic field for <i>S. arlettae</i> stained with Gram stain showing Gram positive cocci.	118
8	Microscopic field for <i>P. putida</i> stained with Gram stain showing Gram negative short bacilli.	121
9	Microscopic field for <i>A. sobria</i> stained with Gram stain showing Gram negative rod-shaped.	123
10	Prevalence of different bacterial isolates.	126
11	Showing significant increase of SOD in diseased fish.	128
12	Showing significant increase of MDA in diseased fish.	128

13	Showing significant increase of GSH in diseased fish.	129
14	Showing significant increase of GSP _x in diseased fish.	129
15	Lane MDNA fragmented smear of diseased fish.	130
16	Liver of <i>Tilapia Nilotica</i> showing congestion of central vein and hepatic sinusoids as well as fatty change of hepatocytes (H & E X 400).	131
17	Liver <i>Tilapia Nilotica</i> showing dilatation and congestion of hepatopaneas Blood vessel together with vacuolar degeneration of hepatocytes (H & E X 400).	132
18	Liver of <i>Tilapia Nilotica</i> showing necrosis of hepatopaneas and fatty change Of hepatocytes (H & E X 400).	132
19	Liver of <i>Tilapia Nilotica</i> showing fatty change of hepatocytes and portal Infiltration with eosinophilic granular cells (H & E X 400).	133
20	Liver of <i>Tilapia Nilotica</i> showing congestion of central vein and hepatic sinusoids as well as cytoplasmic vacuolization of hepatocytes (H & E X 400).	133
21	Liver of <i>Tilapia Nilotica</i> showing necrosis of hepatopaneas and fatty change of hepatocytes (H & E X 400).	134
22	Spleen of <i>Tilapia Nilotica</i> showing focal melanin carrying cells (H & E X 400).	134
23	Spleen of <i>Tilapia Nilotica</i> showing lymphocytic necrosis and depletion (H & E X 400).	135
24	Spleen of <i>Tilapia Nilotica</i> showing hyperplasia of melanin carrying cells (H & E X 400).	135
25	Spleen of <i>Tilapia Nilotica</i> showing haemorrhage and haemosiderosis (H & E X 400).	136
26	Gills of <i>Tilapia Nilotica</i> showing fusion of gill lamellae associated with inflammatory cells infiltration (H & E X 200)	136

27	Gills of <i>Tilapia Nilotica</i> showing hyperplasia and fusion of gill lamellae As wells as congestion of brachial blood vessel (H & E X 200).	137
28	Gills of <i>Tilapia Nilotica</i> showing activation of mucous secreting cells And inflammatory cells infiltration (H & E X 400).	137
29	Gills of <i>Tilapia Nilotica</i> showing brachial infiltration with mononuclear cell and eosinophilic granular cells (H & E X 400).	138
30	Gills of <i>Tilapia Nilotica</i> showing focal necrosis of gill lamellae and activation Of mucous secreting cells (H & E X 400).	138
31	Gills of <i>Tilapia Nilotica</i> showing marked necrosis of gills (H & E X 200).	139
32	Gills of <i>Tilapia Nilotica</i> showing hyperplasia and oedema in gill lamellae (H & E X 200).	139
33	Gills of <i>Tilapia Nilotica</i> showing congestion of brachial blood vessels and Hyperplasia of gill lamellae (H& E X 200).	140
34	Gills of <i>Tilapia Nilotica</i> showing inflammatory cells and eosinophilic Granular cells infiltration in gill lamellae (H & E X 200).	140
35	Gills of <i>Tilapia Nilotica</i> showing oedema, inflammatory cells and eosinophili Granular cells infiltration in gill lamellae (H & E X 400).	141