



**Suez Canal University  
Faculty of Veterinary Medicine  
Department of Fish Diseases and Management**



**STUDIES ON PREVAILING BACTERIAL DISEASES  
IN FRESHWATER CRAYFISH IN RELATION TO  
WILD NILE TILAPIA**

*Thesis presented by*

**Inas Rafat El-Saeed Mohamed**

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<b>Auther</b>	<b>Inas Rafat El-Saeed Mohamed</b>
<b>Title</b>	Studies on prevailing bacterial diseases in freshwater crayfish in relation to wild Nile tilapia
<b>Faculty</b>	Veterinary Medicine- Suez Canal University
<b>Department</b>	Fish Diseases and Management
<b>Location</b>	Ismailia - Egypt
<b>Degree</b>	Ph. D. Fish Diseases and Management
<b>Date</b>	
<b>Language</b>	English
<b>Supervision committee</b>	<p><b>Prof. Dr. Ismail Abd El-Monem Eissa</b> Prof. of Fish Diseases and Management Faculty of Veterinary Medicine, Suez Canal University</p> <p><b>Dr. Maather Mohamed El-Lamie</b> Lecturer of Fish Diseases and Management, Faculty of Veterinary Medicine, Suez Canal University</p> <p><b>Prof. Dr. Ahmed Mohamed El-Gamal</b> Head researcher Bacteriology, Animal Health Research Institute, Mansoura Provincial Laboratory</p>
<b>Summary</b>	
<p>A total of 200 freshwater Crayfish <i>procambarus clarkii</i> were collected during late summer from different natural water resources of River Nile, Dakahlia governorate. The diseased crayfish showed focal heamorrhage on cuticle, liquifacation of hepatopancreas and/or congestion. A total of 258 Nile tilapia <i>Oreochromis niloticus</i> were collected from same water resources of crayfish during late summer and early winter. 60 fish that of healthy appearance were directed for pathogenicity test.</p> <p>The clinical findings and post mortem lesions of naturally infected crayfish were lethargy and erosions associated with softening and darkening of hepatopancreas, while tilapia showed shallow ulcers, diffuse heamorrhages associated with congested vissera. The detected isolates from crayfish were <i>Escherichia coli</i>, <i>Pseudomonas aeruginosa</i>, <i>Proteus</i> spp. and <i>Aeromonas hydrophila</i> which were of higher prevalence. The rate of isolation in winter seasons was <b>0%</b>, while in summer, it was <b>35%</b>. In contrast, the rate in tilapia was <b>8.08</b> and <b>17.17%</b> in winter and summer respectively. Molecular identification revealed that <i>A. hydrophila</i> harbor the lip gene at <b>760bp</b>, while the genetic diversity using RAPD-PCR OPA-10 primer revealed that <b>0.9kb</b> and <b>1.4kb</b> amplicons were common to all isolated <i>Aeromonas</i> with <b>12</b> different amplicons of size ranging from <b>0.5</b> to <b>1.9kb</b>. Histopathological findings were varied from severe to mild degenerative changes.</p>	
<b>Key word</b>	<i>Procumbarus clarkii</i> , <i>Oreochromis niloticus</i> , <i>Aeromonas hydrophila</i>