

**IMMUNE RESPONSE OF NILE TILAPIA (*Oreochromis niloticus*)
ON *Aeromonas hydrophila* ISOLATED FROM TAAL LAKE**

Undergraduate Thesis
Submitted to the Faculty of the
Cavite State University
Indang, Cavite

In partial fulfillment
of the requirement for the degree of
Bachelor of Science in Biology
(Major in Microbiology)

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APRIL 2002

ABSTRACT

PONIENTE, JENIELYN VELASQUEZ, April, 2002, " Immune Response of tilapia (*Oreochromis niloticus*) on *Aeromonas hydrophila* Isolated from Taal Lake", An Undergraduate Thesis, Bachelor of Science in Biology, major in Microbiology, Cavite State University, Indang, Cavite. Advisers: Mr. Francisco M. Heralde III and Dr. Yolanda A. Ilagan

Immune response of Nile tilapia (*Oreochromis niloticus*) on *Aeromonas hydrophila* isolated from Taal Lake was conducted. This study aimed to: optimize the conditions for tilapia blood sample extraction and processing, antibody quantification and white and red blood cells detection and quantification and to determine the effect of *Aeromonas hydrophila* infection on the tilapia antibody titers and levels of white and red blood cells, physical appearance and mortality rate. Four treatments were employed: sterile distilled water as control, heat-killed bacteria, formalin- killed bacteria and bacteria suspended in saline solution at a rate of 2.15×10^5 cells per ml.

It was found out that 10ul of inoculum per gram of fish can be used as a standard concentration of antigen injected to fish considering their body weight.

Positive agglutination was observed in Nile tilapia after injection of *Aeromonas hydrophila*. Increase in antibody titer of fish at all treatments was detected on the third day of post- inoculation up to ten days. Rapid decline of antibody production was observed on the tenth day of post- inoculation and onwards.

Red blood cell (RBC) of Nile tilapia at different treatments except for the control declines after six days post- inoculation. Decrease in leukocyte count of fish given heat-killed, formalin-killed and live bacteria suspended in 0.85% saline solution was observed

after stimulation of antigen.

During the conduct of the study, all fish samples exhibited symptoms of disease caused by *Aeromona hydrophila* such as exophthalmia, fin rot and lost of scales.

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