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**MICROBIAL SUSCEPTIBILITY PROFILE OF ENTERIC
BACTERIAL ISOLATES FROM TILAPIA (*Oreochromis niloticus*)
AND BANGUS (*Chanos chanos*) SOLD IN WET MARKETS**

Thesis

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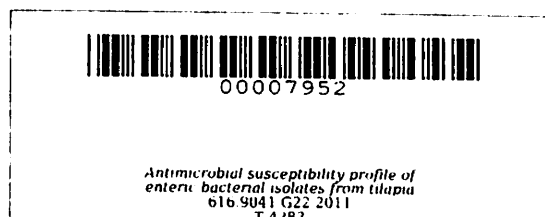
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**ANTIMICROBIAL SUSCEPTIBILITY PROFILE OF ENTERIC BACTERIAL
ISOLATES FROM TILAPIA (*Oreochromis niloticus*) AND
BANGUS (*Chanos chanos*) SOLD IN WET MARKETS**

**Undergraduate Thesis
Submitted to the Faculty of the
Biological Science Department
Cavite State University
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**In partial fulfillment of
the requirements for the degree of
Bachelor of Science in Biology**



MAY M. GATDULA
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ABSTRACT

GATDULA, MAY MOJICA. Antimicrobial Susceptibility Profile of Enteric Bacterial Isolates from Tilapia (*Oreochromis niloticus*) and Bangus (*Chanos chanos*) Sold in Wet Markets. Cavite State University, Indang, Cavite. Adviser: Dr. Yolanda A. Ilagan.

This study was conducted to assess the antimicrobial susceptibility profile of enteric bacteria from tilapia and bangus.

Ninety (90) bacteria were isolated by dilution plating using Cetrimide Agar (CA), Brilliant Green Agar (BGA), Violet Red Bile Agar (VRBA) and Eosin Methylene Blue (EMB). These isolates were identified based on their morphological and physiological characteristics.

Disk diffusion assay was utilized to test the susceptibility of these bacterial isolates to the following antibiotics: ampicillin, clindamycin, oxacillin, norfloxacin, lincomycin, nitrofurantoin, fosfomycin, ciprofloxacin, nalidixic acid, erythromycin, rifampicin, tetracycline, oxytetracycline, streptomycin and chloramphenicol.

All isolates were resistant to rifampicin; 91.11% to clindamycin; 56.67% to ampicillin; 41.11% to oxacillin; and 22.22% to chloramphenicol. One hundred percent (90) of the isolates were susceptible to fosfomycin; 96% to ciprofloxacin; 87.78% to streptomycin; 86.67% to oxytetracycline and 80% nalidixic acid. This implies that fosfomycin, ciprofloxacin, streptomycin, oxytetracycline and nalidixic acid could be used in treating diseases of tilapia and bangus.

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INTRODUCTION

Fish culture is a very important industry (Sakai, 1999). It is a main source of livelihood for majority of families in some regions of the country. According to United Nations Food and Agriculture Organization (2005), Philippines, China, Egypt, Indonesia, and Thailand are the principal tilapia producing countries of about 2.3 million metric tons (mt) total global production. In 2004, Philippines, Indonesia and Taiwan account for 47.7%, 42.1% and 9.9%, respectively of the world's bangus production. The country produced 285 metric tons but exported less than 1% (925 metric tons) of bangus in 2005 (FMECD, 2004).

Fish meat is extremely perishable. Its safe consumption requires adequate sanitary conditions from the moment of catch, through preparation, sale and consumption (Albuquerque et al., 2007). Regulations governing aquaculture production vary greatly between countries. However, the enforcement of any national regulations regarding