UNIVERSITY OF THE PHILIPPINES VISAYAS
COLLEGE OF ARTS AND SCIENCES
Division of Biological Sciences
Miagao, Iloilo, 5023

IDENTIFICATION AND ANTIBIOTIC RESISTANCE OF ENTEROCOCCUS (Schleifer and Kilpper-Bälz1984) SPECIES ISOLATED FROM ILOILO RIVER

An Undergraduate Paper
Presented to the
The Faculty of Division of Biological Sciences
College of Arts and Sciences
University of the Philippines Visayas
Miagao, Iloilo, 5023

In Partial Fulfillment
of the Requirements for the Degree
Bachelor Science in Biology

JAN REYGINE G. ANSINO
April 2014

IDENTIFICATION AND ANTIBIOTIC RESISTANCE OF ENTEROCOCCUS (Schleifer and Kilpper-Bälz1984) SPECIES ISOLATED FROM ILOILO RIVER

Jan Reygine G. Ansino. University of the Philippines Visayas. April 2014.

ABSTRACT

The presence *Enterococci* species in the water has long been regarded as an indicator of fecal contamination. With the increasing rate of antimicrobial resistance globally, infections caused by enterococcal species became difficult to treat. The study determined the species distributions and antimicrobial resistance profiles of *Enterococcus* species isolated from water and sediment samples in the Iloilo River. Susceptibility of the isolates was tested against: ampicillin, penicillin, ciprofloxacin, chloramphenicol, doxycycline, erythromycin, tetracycline, and vancomycin. Among the 115 fecal coliform samples, a total of 61 (53%) isolates were confirmed to belong to the genus *Enterococcus*. Of these, 40% were identified as *Enterococcus faecalis*, followed by *Enterococcus faecium* 33% and *Enterococcus avium* (4%). Isolates showed resistance to tetracycline (51%), erythromycin (18%) and doxycycline (13%) and a high level susceptibility to ampicillin (100%), chloramphenicol (93%) and penicillin (90%). Multiple antibiotic resistance patterns revealed resistance to at least four antibiotics. Six (12%) vancomycin-resistant *Enterococci* (VRE) were detected. The results revealed low level of antibiotic resistance in the river. However, the presence of these fecal contaminants in the river can still pose a potential risk to the human health and the of spread of antibiotic resistance genes indicating a great importance in improving risk management practices in the river.

Keywords: *Enterococci*, antibiotic(s), Iloilo River, resistance, water quality