



**ANTIMICROBIAL ACTIVITY OF BIOACTIVE PROTEINS FROM
TAMBJA MOROSA AGAINST MULTIDRUG-RESISTANT AND
NONDRUG-RESISTANT CLINICAL PATHOGENS**

An Undergraduate Research Presented to the
Faculty of the Biological Sciences Department
College of Science and Computer Studies
De La Salle University-Dasmariñas
Dasmariñas City, Cavite

In Partial Fulfillment of the Requirements
For the Degree Bachelor of Science in Biology Major in Human Biology

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HUB 41

March 2014



ABSTRACT

The rich diversity of species in the marine environment is widely studied since it has a great potential as source of bioactive natural products that may alleviate the emerging antibiotic resistance. *Tambja morosa*, a sea slug species, was used as test organism in the study to determine its antimicrobial activity against multidrug-resistant and nondrug-resistant clinical pathogens. The antimicrobial activity of the extracts against selected multidrug-resistant clinical pathogens were compared to the results of its corresponding nondrug-resistant clinical pathogens. Disc diffusion method was used to evaluate the inhibitory effect of the crude extract and crude protein extract of the specimen. The antimicrobial activity of the crude extract and crude protein extract was measured by the presence of inhibition. The bioactive compounds of the collected specimens were obtained through ethanolic extraction. A preliminary antimicrobial test was accomplished using the crude extract. The results showed that *T. morosa* was able to present inhibition against methicillin-resistant *Staphylococcus aureus* (MRSA), multidrug-resistant *E. coli* (MEC), *Staphylococcus aureus*, *Enterobacter aerogenes*, and *Klebsiella pneumonia*. TCA protein protocol was used to isolate the protein compound of the crude extract. The results showed that the crude protein extract of *T. morosa* was able to present inhibition against *Staphylococcus aureus*. The relationship between the inhibitory effect of crude protein extract on multidrug-resistant and nondrug-resistant clinical pathogens was measured by Fischer's exact test. With the statistical tool used, the researchers have concluded that there was no significant difference between the inhibitory effect of crude protein extracts on multidrug-resistant and nondrug-resistant clinical pathogens.



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