

**ISOLATION AND CHARACTERIZATION OF WATERBORNE BACTERIA  
FROM CLSU WATER SYSTEM AND THEIR RESISTANCE  
TO SELECTED PLANT EXTRACTS**

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An Undergraduate Thesis Submitted to the Faculty of the Department of Biological  
Sciences, College of Arts and Sciences, Central Luzon State University,  
Science City of Muñoz, Nueva Ecija, Philippines  
in Partial Fulfillment of the Requirements  
for the Degree of

**BACHELOR OF SCIENCE IN BIOLOGY**  
**(Major in Microbiology)**

**JUNE 2019**

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## ABSTRACT

**HUFANA, ROCELLE JIRAH C.**, Department of Biological Sciences, College of Arts and Sciences, Central Luzon State University, Science City of Munoz, Nueva Ecija, Philippines, **MAY 2019, ISOLATION AND CHARACTERIZATION OF WATERBORNE BACTERIA FROM CLSU WATER SYSTEM AND THEIR RESISTANCE TO SELECTED PLANT EXTRACTS**

Adviser: FEDERICO G. PINEDA, M.Sc.

Plant materials are readily available and cost is far less than antibacterial agents. Due to this, this study aimed to characterize the water borne bacteria that were isolated based on its morphological and cultural characteristics and to determine the antibacterial properties of selected allergenic grasses, namely *Cynodon dactylon* (L.) Pers. (Bermuda grass), and *Saccharum spontaneum* L. (Wild sugarcane) against the isolated and characterized water borne bacteria.

A total of two bacterial isolates were pure cultured and were then subjected to morphological and cultural characterization. Based on the result of the characterization and rapid testing, the colonies were identified as *Myroides* spp. and *Escherichia coli*. The plant samples were extracted through hexane and ethanol solvents. The efficacy of the plant extracts was tested against the isolated bacteria through disc diffusion assay. Although zones of inhibition were observed, statistical analysis shows that the extracts are not effective as eradicant against the two isolated waterborne bacteria. This might be suggested that the inhibitory activities of the plant extracts were found to be extract and dose dependent.

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