ANTIBACTERIAL ACTIVITY OF ENDOPHYTIC FUNGI ISOLATED FROM MANGROVES IN MANILA BAY

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

In Partial Fulfilment of the Requirements for the degree

Bachelor of Science in Biology major in Human Biology

JESSA ANJELICA T. AQUINO
SARAH JANE T. CANUTO
March 2014



TABLE OF CONTENTS

Title Page	01
Table of Contents	02
Abstact	05
Approval Sheet	06
Acknowledgement	07
CHAPTER 1 INTRODUCTION	
1.1 Background of the Study	08
1.2 Conceptual Framework	10
1.3 Objectives of the Study	11
1.4 Scope and Limitations	11
1.5 Significance of the Study	12
1.6 Definition of Terms	14
CHAPTER 2 LITERATURE REVIEW	
2.1 Conceptual Literature	15
2.2 Related Studies	22
CHAPTER 3 METHODOLOGY	
3.1 Research Design	26
3.2 Research Setting	26
3.3 Research Procedure	26





CHAPTER 4 RESULTS & DISCUSSION				
4.1 Results	30			
4.2 Discussion	35			
CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS				
5.1 Conclusions	39			
5.2 Recommendations	40			
Cited References	41			
Appendices				
A. Map of Study Site	48			
B. Standard Procedure	49			
C. Photodocumentation	55			
D. Colonial Characteristics of Endophytic Fungi	59			
E. Morphological Characteristics of Endophytic Fungi	62			
F. Reference for the Morphological Features of	65			
Endophytic Fungi				
G. Results of Kirby Bauer Method	69			

Curriculum Vitae



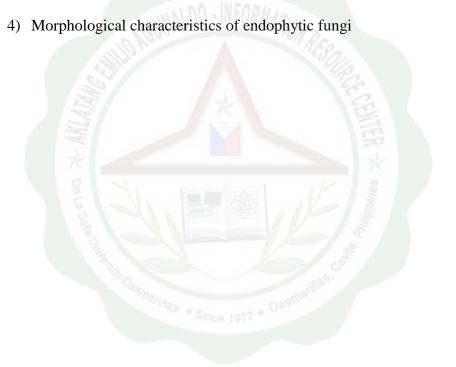
De La Salle University - Dasmariñas (в віогоду ркодкам



65

List of Tables

1)	Endophytic fungi in collected mangroves	30
2)	Colonial and morphological characteristics of the	31
	presumptive endophytic fungi	
3)	Zone of inhibition of the endophytic fungi against	33
	clinical pathogens	





Abstract

The study determined the antibacterial activity of endophytic fungi isolated from mangroves in Manila Bay. After three weeks of fermentation, extraction of crude extracts was done and was subjected to a panel of clinical pathogens using Kirby-Bauer method. After 24 hours of incubation, inhibition around the disks was observed and measured. Results showed that a total of 23 presumptive endophytic fungi were isolated based on their morphological and colonial characteristics. Forty four percent of the crude extracts inhibited *Staphylococcus aureus*; 26% inhibited *Klebsiella pneumoniae*; 22% inhibited *Proteus vulgaris*; 13% inhibited *Bacillus cereus*; 30% inhibited *Escherichia coli*; and 52% inhibited *Enterobacter aerogenes*.

