



**DETECTION OF POTENTIAL ANTI-VIRULENCE ACTIVITIES
OF *Euphorbia hirta* L. (TAWA-TAWA) EXTRACT
AGAINST *Vibrio cholera***

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

In Partial Fulfilment of the Requirements for the Degree
Bachelor of Science in Medical Biology

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May 2017



ABSTRACT

This study detected the potential anti-virulence activities of *Euphorbia hirta* L. extract against *Vibrio cholera*. The goal of the study was to first identify if *Euphorbia hirta* L. is antibacterial to *Vibrio cholera*. A bacterial lawn was prepared for the bacteria on a Mueller Hinton Agar, then was assayed using Disk diffusion method in order to test the antimicrobial activities of the plant extract against the test organism. The disks with plant extract did not show any signs of zone of inhibition. This proves that the plant extract does not have antimicrobial activities against the test organism. The second step of this study was the determination of anti-virulence activities with the use of various tests including: DNase test, alpha hemolytic toxin test, and biofilm formation test. All performed tests except the biofilm formation test, which increased the growth of the bacteria, showed anti-virulence activities.

Keywords: *Disk diffusion method, DNase test, Alpha hemolytic toxin test, biofilm formation test, quorum sensing*



TABLE OF CONTENTS

Title Page	1
Abstract	2
Approval Sheet	3
Acknowledgments	4
Table of Contents	6
CHAPTER 1 INTRODUCTION	
1.1 Background of the Study	8
1.2 Conceptual Framework	10
1.3 Statement of the Problem	11
1.4 Scope and Limitations	11
1.5 Significance of the Study	12
1.6 Definition of Terms	13
CHAPTER 2 LITERATURE REVIEW	
2.1 Conceptual Literature	14
2.2 Related Studies	22
CHAPTER 3 METHODOLOGY	
3.1 Research Design	28
3.2 Research Setting	28
3.3 Research Procedure	29



3.4	Data Gathering	33
CHAPTER 4 RESULTS AND DISCUSSION		
4.1	Results	34
4.2	Discussion	40
CHAPTER 5 CONCLUSION AND RECOMMENDATION		
5.1	Conclusion	44
5.2	Recommendation	44
Cited References		46
Appendices		
A. Standard Procedure		62
B. Specimen Taxonomy		67
C. Raw Data		69
D. Statistical Analysis		72
E. Photo Documentation		73
F. Certification		82
Curriculum Vitae		83