



**EFFECTS OF CRUDE LEAF EXTRACT OF SELECTED LEGUMINOUS  
TREES FOUND IN DE LA SALLE UNIVERSITY – DASMARIÑAS  
USING CAM ASSAY**

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 Biology Major in Human Biology

**BEVERLY B. BALMEO**  
**JOYCE CAMELLE B. JABONITE**

May 2018



## ABSTRACT

Angiogenesis is a process of forming new blood vessels which plays a vital role in various diseases, including cancer. However, there are few researches reported that leguminous plants have a potential in minimizing the growth of blood vessels, particularly *Albizia saman* (Rain tree), *Delonix regia* (Fire tree), *Cassia fistula* (Golden shower), *Pterocarpus indicus* (Narra) and *Erythrina variegata* (Dap-dap). Active ingredients were extracted using rotary evaporator and then administered to the 10-day old duck embryo after two days of incubation. Different set-ups were prepared according to the treatments that were administered: 1 control group and 15 experimental groups. Results showed that the selected legume plants used in the study have anti-angiogenic inhibition properties except on *Albizia saman*. It also revealed that the duck embryo injected with different concentrations: 100ppm, 300 ppm and 500 ppm have significant differences with each other.

Key words: *albizia saman*, *delonix regia*, *cassia fistula*, *pterocarpus indicus*, *erythrina variegate*, *duck embryo*, *angiogenesis*, *blood vessels*



## TABLE OF CONTENTS

Title Page	1
Abstract	2
Acknowledgments	3
<b>CHAPTER 1 INTRODUCTION</b>	
1.1 Background of the Study	06
1.2 Conceptual Framework	11
1.3 Statement of the Problem	12
1.4 Hypotheses	12
1.4 Scope and Limitations	13
1.6 Significance of the Study	14
1.7 Definition of Terms	15
<b>CHAPTER 2 LITERATURE REVIEW</b>	
2.1 Conceptual Literature	16
2.2 Related Studies	25
<b>CHAPTER 3 METHODOLOGY</b>	
3.1 Research Design	29
3.2 Research Setting	30
3.3 Research Procedure	30
3.4 Data Gathering and Statistical Analysis	32



**CHAPTER 4 RESULTS AND DISCUSSION**

4.1	Results	33
4.2	Discussion	42

**CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS**

5.1	Conclusions	46
5.2	Recommendations	47

	Cited References	48
--	------------------	----

Appendices

A.	Photo documentation	53
B.	Standard Procedure	68
C.	Raw Data	71
D.	Statistical Analysis	78

	Curriculum Vitae	82
--	------------------	----