



**ANGIOGENIC ACTIVITY OF *Citrullus lanatus* (WATERMELON) FRUIT
EXTRACT USING CHORIO-ALLANTOIC MEMBRANE
(CAM) ASSAY**

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

In Partial Fulfilment of the Requirements for the Degree
Bachelor of Science in Biology
(Major in Human Biology)

PAULINE T. AMBAT

PACITA B. REDULLA

March 2013



ABSTRACT

The Angiogenic effect of *Citrullus lanatus* using whole fruit crude extract was tested using a 12-day old duck embryo CAM assay. The extraction of fruit extract was obtained to produce the desired concentration such as T₀ (control), T₁ (25%), T₂ (50%), T₃ (75%), T₄ (100%). The results indicated that through the administration of various fruit extract of *Citrullus lanatus* has varying effects to the number of new blood vessels in a 12-day old duck embryo. T₄ is the only treatment which is the best candidate for angiogenesis. Therefore *Citrullus lanatus* (watermelon) is capable of angiogenesis due to its phyto-chemical components, the higher the concentration, the more effective in controlling angiogenesis. Lower concentration of the extract administered means lesser effect therefore the concentration must be increased.

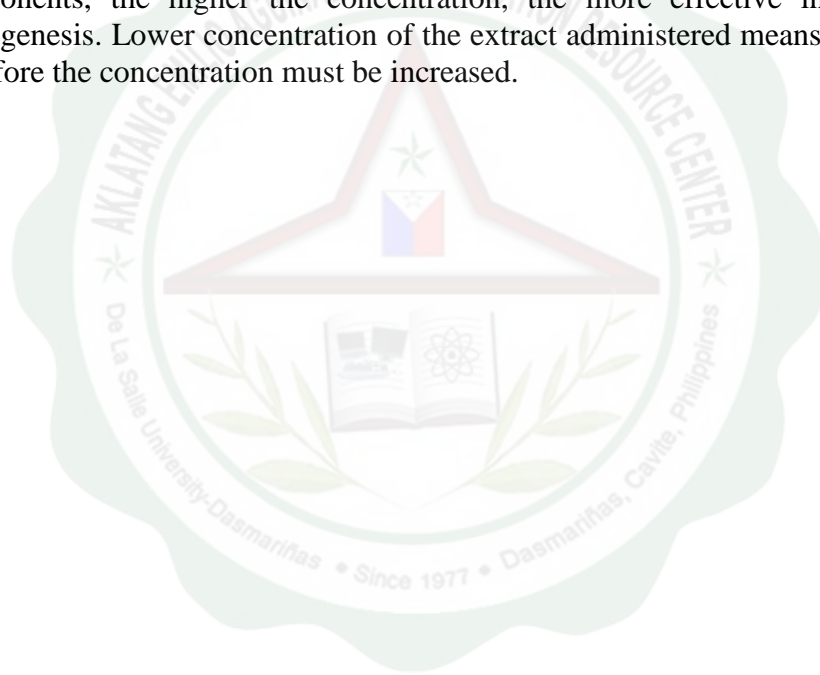




TABLE OF CONTENTS

	PAGE
TITLE PAGE	1
APPROVAL SHEET	2
ACKNOWLEDGMENTS	3
ABSTRACT	4
TABLE OF CONTENTS	5
CHAPTERS	
I. INTRODUCTION	
1.1 Background of the Study	7
1.2 Conceptual Framework	9
1.3 Statement of the Problem	10
1.4 Scope and Limitations	11
1.5 Significance of the study	11
1.6 Definition of terms	13
II. REVIEW OF LITERATURE	
2.1 Conceptual Literature	14
2.2 Related Studies	25
III. METHODOLOGY	
3.1 Research Design	27
3.2 Research Setting	27
3.3 Research Procedure	28



3.4 Data Gathering and Statistical Analysis	30
IV. RESULTS AND DISCUSSION	31
4.1 Results	31
4.2 Discussion	33
V. CONCLUSION	36
RECOMMENDATION	37
CITED REFERENCES	38
APPENDICES	
A. Photo documentation	42
B. Statistical Tool	47
C. Curriculum Vitae	51