

🐑 De La Salle University - Dasmariñas (**BIOLOGICAL SCIENCES DEPARTMENT**

EFFECTS OF Bougainvillea spectabilis Willd. (BOUGAINVILLEA) CRUDE LEAF EXTRACT ON THE CHOLESTEROL LEVEL OF Rattus norvegicus (WISTAR RAT) INDUCED WITH HYPERCHOLESTEROLEMIA



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

MANAL M. ELSAYED **ALLEN JASPER M. ORQUILLAS**

March 2014



🖹 De La Salle University - Dasmariñas 🅻 **BIOLOGICAL SCIENCES DEPARTMENT**

ABSTRACT

Hypercholesterolemia has been a persistent mediator for causing disability and deaths throughout the world. Bougainvillea spectabilis has been invariably associated in potentially lowering or averting elevated cholesterol levels due to the presence of therapeutic phytochemicals and the insulin mimicking compound, D-pinitol. Twenty one (21) male albino rats, which were divided into four treatment groups namely T₀-negative control, T₁-200 mg/kg/day leaf extract, T₂-300 mg/kg/day leaf extract, and T₃-400 mg/kg/day leaf extract, were acclimatized for two weeks, then buttered pellets were utilized to induce hypercholesterolemia for three weeks, and thereafter, the leaf extract was prepared and orally administered for three weeks. Three blood samples were collected preceding the blood analysis: After acclimatization, after the high fat diet, and the after the administration of the treatment. The results have shown that Bougainvillea leaf extract was effective in restoring the preliminary levels of total cholesterol and HDL of the albino rats induced with hypercholesterolemia. Nevertheless, there was no significant difference between the varying dosages of the treatment.

Key words: High Density Lipoprotein (HDL).



De La Salle University - Dasmariñas 🚳

TABLE OF CONTENTS

Title Page	1
Abstract	2
Approval Sheet	3
Acknowledgements	4
Table of Contents	6

CHAPTER 1 INTRODUCTION

	1.1	Background of the Study	08
	1.2	Conceptual Framework	11
	1.3	Statement of the Problem	11
	1.4	Scope and Limitations	12
	1.5	Significance of the Study	13
	1.6	Definition of Terms	14
CHAF	PTER 2	LITERATURE REVIEW	
	2.1	Conceptual Literature	15
	2.2	Related Studies	17
CHAF	PTER 3	METHODOLOGY	
	3.1	Research Design	21
	3.2	Research Setting	21
	3.3	Research Procedure	22

De La Salle University - Dasmariñas 🚳

	3.4	Data Gathering and Statistical Analysis	26			
CHAPTER 4 RESULTS AND DISCUSSION						
4.1 Results						
	4.2 D	iscussion	29			
CHAPTER 5 CONCLUSION AND RECOMMENDATIONS						
	5.1 C	onclusion	32			
	5.2 R	ecommendations	32			
Cited References						
Apper	ndices					
Α.	Stanc	lard Procedures	39			
В.	Raw I	Data and Statistical Analysis	43			
C.	Photo	odocumentation	49			
D.	D. Curriculum Vitae					