HEMOSTATIC EFFECT OF *Durio zibethinus* (DURIAN) ON THE CLOTTING PARAMETERS OF ASPIRIN-TREATED MALE ALBINO RATS

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 Fulfillment of the Requirements for the degree
of Bachelor of Science in Biology Major in Human Biology

Cristy Ann G. Marquez
Romela Mara O. Tamayo
March, 2014

ABSTRACT

Durian is widely known for its distinct flavor and excellent amount of nutritional components that may promote therapeutic effects. Various dosages of homogenized durian flesh were prepared and orally administered to the rats daily for three weeks. Twenty four (24) albino rats were divided into four treatment groups, having T0 as the control group, T1- 15 mg/ 25 ml durian, T2- 20 mg/25 ml durian and T3- 25 mg/25 ml. Each treatment was done in replicate. The rats were acclimatized for seven days before aspirin was given. After acclimatization, initial platelet count, initial bleeding time and initial clotting time was conducted. Subsequently 190 mg/kg of aspirin combined with the treatment concentrations were given to verify if aspirin aggravated bleeding in male albino rats via manual platelet count and the mortality rate post 24 hour administration. Bleeding time and clotting time was done before aspirin (Day 1) administration and at day 7, 14 and 21. Results showed that *Durio zibethinus* can reduce bleeding time and promote faster clotting ($p \leq 0.05$). T3, T2, T1 showed significant difference compared to control groups, however since the effect in bleeding time and clotting time regardless of what treatment concentration used almost the same, T1 was already considered effective to promote clot formation. The difference on the efficacy of each treatment is due to the varying amounts of nutritional content such as folate, vitamin K, calcium, ascorbic acid, and other mineral components.

TABLE OF CONTENTS

Title Page 1

Abstract 2

Approval Sheet 3

Acknowledgements 4

Table of Contents 5

CHAPTER 1 INTRODUCTION

1.1 Background of the study 7

1.2 Conceptual framework 8

1.3 Statement of the problem 9

1.4 Hypothesis 9

1.5 Scope and delimitations of the study 10

1.6 Significance of the study 11

1.7 Definition of terms 12

CHAPTER 2 REVIEW LITERATURE

2.1 Conceptual Literature 14

2.2 Related Studies 21

CHAPTER 3 METHODOLOGY

3.1 Research Design 24

3.2 Research Setting 24

3.3 Research Procedure 25

3.4 Data Gathering and Statistical Analysis 29

CHAPTER 4 RESULTS AND DISCUSSION

4.1 Results 30

4.2 Discussion 34

CHAPTER 5 CONCLUSION AND RECOMMENDATION

5.1 Conclusion 37

5.2 Recommendation 37

Cited References 39

Appendices

A. Photo of Specimen 44

B. Standard Procedure 45

C. Raw Data and Statistical Analysis 50

D. Photo Documentation 63

E. Computation 69

F. Curriculum Vitae 73