



بسم الله الرحمن الرحيم

∞∞∞∞

تم عمل المسح الضوئي لهذه الرسالة بواسطة / سامية زكى يوسف

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى

مسئولية عن محتوى هذه الرسالة.

ملاحظات:

- بالرسالة صفحات لم ترد بالأصل
- بعض الصفحات الأصلية تالفة
- بالرسالة صفحات قد تكون مكررة
- بالرسالة صفحات قد يكون بها خطأ ترقيم

IMMUNO-PHYSIOLOGICAL EFFECTS OF CRUDE
AQUEOUS EXTRACTS OF LEAVES AND FRUITS
OF CHINA-BERRY TREE, "MELIA AZEDARACH L"
ON WHITE ALBINO-RATS "RATTUS RATTUS"

Thesis

Submitted in Partial Fulfillment for the Requirements
of Master Degree of Science in Zoology

By

Tahany El Sayed Ahmed El Akhal

B. Sc. (Zoology, 1989)

Supervisors

Prof. Dr. Gamal Abd Al-Raouf Madkour

Professor of Comparative Anatomy

Dr. Fathy Ali Atta

Lecturer of Immunology

Zoology Department

Faculty of Science

Tanta University

2000



The first part of the paper discusses the importance of the study of the history of the United States. It is argued that the study of the history of the United States is essential for a full understanding of the country and its people. The second part of the paper discusses the importance of the study of the history of the world. It is argued that the study of the history of the world is essential for a full understanding of the world and its people. The third part of the paper discusses the importance of the study of the history of the United States and the world. It is argued that the study of the history of the United States and the world is essential for a full understanding of the United States and the world.



وَقُلْ رَبِّ زِدْنِي عِلْمًا

SUPERVISORS

Prof. Dr. Gamal Abd Al-Raouf Madkour

Professor of Comparative Anatomy

Faculty of Science

Zoology Department

Tanta University

Dr. Fathy Ali Mohamed Atta

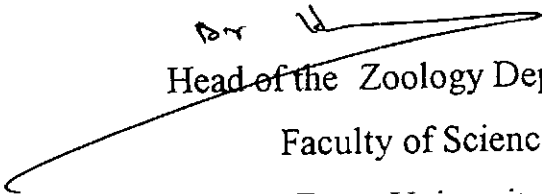
Lecturer of Vertebrate Immunology

Faculty of Science

Zoology Department

Tanta University

Prof. Dr. M. Abd El-Monem Hegazy


Head of the Zoology Department

Faculty of Science

Tanta University

CURRICULUM VITAE

Full name : Tahany El Sayed Ahmed El Akhal.

Date of birth : 1-10-1968.

Place of birth : Tanta, Egypt.

Nationality : Egyptian .

Social status : Single .

Permanent address: 9-El Soltan Morad Street, Tanta, Egypt .

Education : Primary School : Mostafa Heshmat Primary School,
from 1974 to 1979. Prep. School: El Kased
Preparatory School, from 1979 to 1982. Secondary
School : Kasem Ameen Secondary School, from 1982
to 1985. University : Tanta University , Faculty of
Science from 1985 to 1989 .

Qualifications : B. Sc. In Zoology(1989), Fac. Sci. Tanta Univ.

Attended and passed successfully the post graduate
courses in partial fulfillment of M. Sc. in 1991.

Prof. Dr. M. Abd El-Monem Hegazy

Dr

Head of the Zoology Department

Faculty of Science

Tanta University

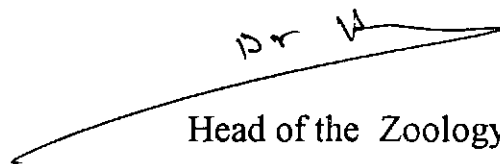
Tanta University
Faculty of Science
Department of Zoology

M. Sc. Courses Studied By The Candidate

Beside the work presented in this thesis, the candidate has attended and passed successfully the following post-graduate courses as a partial fulfillment of the requirements for the Master Degree of Science during the academic year 1990-1991: -

- 1- Comparative Vertebrate Anatomy.
- 2- Organic Evolution and Evolutionary Morphology.
- 3- Embryology and Experimental Embryology.
- 4- Statistics.
- 5- German Language.

Prof. Dr. M. Abd El-Monem Hegazy



Head of the Zoology Department
Faculty of Science
Tanta University

ACKNOWLEDGMENTS

All gratitude is due to the Almighty God who guided and aided me to bring forth to light this thesis.

I am greatly indebted with grateful gratitude and appreciation to prof. Dr. Gamal Abd Al-Raouf Madkour, Professor of Comparative Anatomy , Department of Zoology, Faculty of Science , Tanta University, for his unlimited encouragement , most useful supervision, beneficial advices , valuable guidance, important instruction, great assistance he offered , and the facilities during the course of this study.

I am also greatly indebted with great appreciation and deepest gratitude to Dr. Fathy Ali Atta , Lecturer of Immunology , Department of Zoology, Faculty of Science , Tanta University, for suggesting the point and the protocol of research , most useful supervision , continuous instruction , helpful directions , providing the literature , comments valuable suggestion and interpretations , help in preparation of the manuscript, constructive criticism and his fruitful assistance during the work , which were of great importance .

I would like also to acknowledge Prof. Dr. Esmaeil El-Sharkawy , Professor of Physiology , Department of Zoology, Faculty of Science , Tanta University, , for the great help and the facilities he offered .

Finally , I would like also to express sincere appreciation and hearty gratitude to my mother, my brothers, Emad and Alaa, and my sister, Thoraia , for their forbearance and great assistance during this study.

CONTENTS

CHAPTER	PAGE
I-INTRODUCTION.....	1
II-REVIEW OF LITERATURE	5
1. Circulation of Lymphocytes.....	5
2. Clinical Aspects of Toxic Plants.....	6
3. The Spleen and Lymphocyte Migration.....	22
4. Steroid Hormones and Immune Response.....	30
5. Corticosteroids and Lymphoid Cells.....	40
III-AIM OF THE WORK	44
IV-MATERIALS AND METHODS.....	47
1. Experimental Animals:	47
2. Administration of a Suspension of Milled Dry Leaves or Fruits of China-berry Tree.....	47
3. Splenectomy	48
4. Preparation of SRBC for Injection and Immunization Regimen	48
5. The Experimental Design and Bioassays.....	49
EXPERIMENT I : Evaluation of the effect of administration of a suspension of milled dry leaves or fruits of <i>Melia azedarach</i> L. on the distribution of the lymphocytes in the lymph nodes and organs of normal rats.....	50
EXPERIMENT II : Determination of the effect of splenectomy on The distribution of the lymphocytes in the lymph nodes and organs.....	50
EXPERIMENT III : Evaluation of the effect of the suspension of milled dry leaves or fruits of <i>Melia azedarach</i> L. on the distribution of lymphocytes in the lymph nodes and organs during active cellular immune response:.....	51
6. Blood Sampling.....	52
7. Lymph Node Dissection.....	52
8 a. Method of Determination of the Growth and Involution of Lymphoid Organs.....	55
8 b. Method of Cell Counts	55
9. Determination of Alkaline Phosphatase Activity of the Lymphoid Tissues (Bessey <i>et al.</i> , 1946).....	56
10- Statistical Analysis of the Data.....	58
V- RESULTS.....	60
1. Effect of a suspension of milled dry leaves or fruits of China- berry tree <i>Melia azedarach</i> L. on the lymphoid organs of normal rats	60

A. The effect of suspension-treatments on the relative weight of Lymphoid organs	60
B. The effect of suspension-treatments on the lymphocyte count of Blood and lymphoid organs.	61
2. Effect of a suspension of milled dry leaves or fruits of China-berry tree <i>M. azedarach</i> L. On the lymphoid organs of splenectomized rats.....	64
A. The effect of suspension-treatments on the relative weight of lymphoid Organs.....	65
B. The effect of suspension-treatments on the lymphocyte count of blood and lymphoid organs.	68
3. Effect of a suspension of milled dry leaves or fruits of China-berry tree <i>Melia azedarach</i> L. on the cellular immune response of SRBC- immunized Rats.	71
A. The effect of suspension-treatments on the relative weight of the lymphoid organs of SRBC-immunized rats.	72
B.The effect of suspension - treatments on the number of the lymphocytes in the lymphoid organs of SRBC- immunized rats . . .	73
C.The effect of suspension-treatments on the alkaline phosphatase activity of the lymphoid tissues of SRBC-immunized rats.	74
VI- DISCUSSION	76
VII-SUMMARY.....	97
VIII-CONCLUSION.	104
IX-REFERENCES.....	105
X-LIST OF FIGURES	
LIST OF TABLES.....	
XI-ARABIC SUMMARIY	