



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



شبكة المعلومات الجامعية
@ ASUNET



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of
15-25- c and relative humidity 20-40%

بعض الوثائق الأصلية تالفة

بالرسالة صفحات لم ترد بالاصل

**Evaluation of the role of the antioxidant
silymarin in modulating the *in vivo* genotoxicity
of the antiviral drug ribavirin in the laboratory
mice (*Mus musculus*)**

A Thesis

Submitted to the Faculty of Science,

Cairo University,

**In partial Fulfillment of the Requirements of the
Degree of Ph.D of Science in Zoology**

By

Nahed Ahmed Hussien

M.Sc. in Zoology

Department of Zoology

Faculty of Science

Cairo University

(2010)



FACULTY OF SCIENCE

TO WHOM IT MAY CONCERN

This is to certify that **Mrs. Nahed Ahmed Hussein** has attended and passed successfully the following post graduate courses as a partial fulfillment of the requirements of the degree of Ph.D of science. (Cell Biology, Histology and Genetics, 2000).

- | | |
|---|----------------------------|
| 1. Histochemistry. | 11. Neurophysiology. |
| 2. Cell Pathology. | 12. Comparative Histology. |
| 3. Biochemical Taxonomy. | 13. Immunology. |
| 4. Cell Biology. | 14. Endocrinology. |
| 5. Radiobiology. | 15. Tissue Culture. |
| 6. Embryology. | 16. Histology. |
| 7. Cancer Biology. | 17. Biostatistics. |
| 8. Molecular Biology. | 18. Comparative Anatomy. |
| 9. Biotechnology. | 19. Computer Science. |
| 10. Microtechniques & Electron
Microscope. | 20. German Language. |

This Certificate is issued at his own request.

Date of birth: 19 / 11 / 1977

Place of birth: El Haram - Giza

Controller

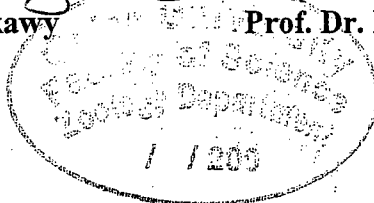
Mona Sharkawy

Prof. Dr. Mona el Sharkawy

Head of Zoology Department

K. S. Abouelala

Prof. Dr. Kawthar Said



APPROVAL SHEET

Title of the Ph.D Thesis:

Evaluation of the role of the antioxidant silymarin in modulating the *in vivo* genotoxicity of the antiviral drug ribavirin in the laboratory mice (*Mus musculus*)

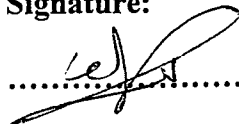
Name of the candidate: Nahed Ahmed Hussien.

Supervision Committee:

Signature:

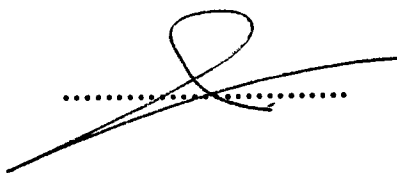
1- Prof. Dr. Akmal Abd El-Reheim Elghor

Prof. of Genetics
Faculty of Science
Cairo University

.....


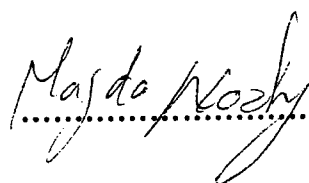
2- Prof. Dr. Maged Mostafa Al-Sherbiny

Prof. of Immunology
Faculty of Science
Cairo University

.....


3- Prof. Dr. Magda Mohammed Noshy

Ass. Prof. of Genetics
Faculty of Science
Cairo University


.....


4- Prof. Dr. Sobhy Hasb El naby

Prof. of Genetics
Faculty of Science
Menofia University

.....


**Head of Zoology Department
Faculty of Science, Cairo University
Prof. Dr. Kawthar Said**

.....




*First of all thanks Allah for all things
in my life.*

*∞ My husband Ehab for his support and
my daughter Aysa.*

*∞ My kind Father, Mother and wonderful
Sisters (Nashwa, Nadia and Noha), and also
my Brother (Hussien).*



For all my friends.

ACKNOWLEDGMENT

First of all I would like to thank my merciful Allah for completion of this work and sincere thanks and gratitude are aimed to acknowledge all those who helped this thesis attain its present form.

I would like also to express my appreciation and gratitude to **Prof. Dr. Mohammed Akmal Elghor** Professor of Genetics, Faculty of Science, Cairo University, for giving me the chance to undertake the subject of this thesis, also for his continuous encouragement, valuable instruction, advices and direct supervision of this work.

I would like also to express my appreciation and gratitude to **Prof. Dr. Maged Mostafa Al-Sherbiny** Professor of Immunology, Faculty of Science, Cairo University.

I would like to express my cardinal thanks and my appreciation to **Prof. Dr. Magda Mohammed Noshay**, Assistant Professor of Genetics, Faculty of Science, Cairo University, for her kind supervision, encouragement and checking the final manuscript.

I would like to express my thanks and my appreciation to **Prof. Dr. Sobhy Hasb El naby**, Professor of Genetics, Faculty of Science, Menofia University.

