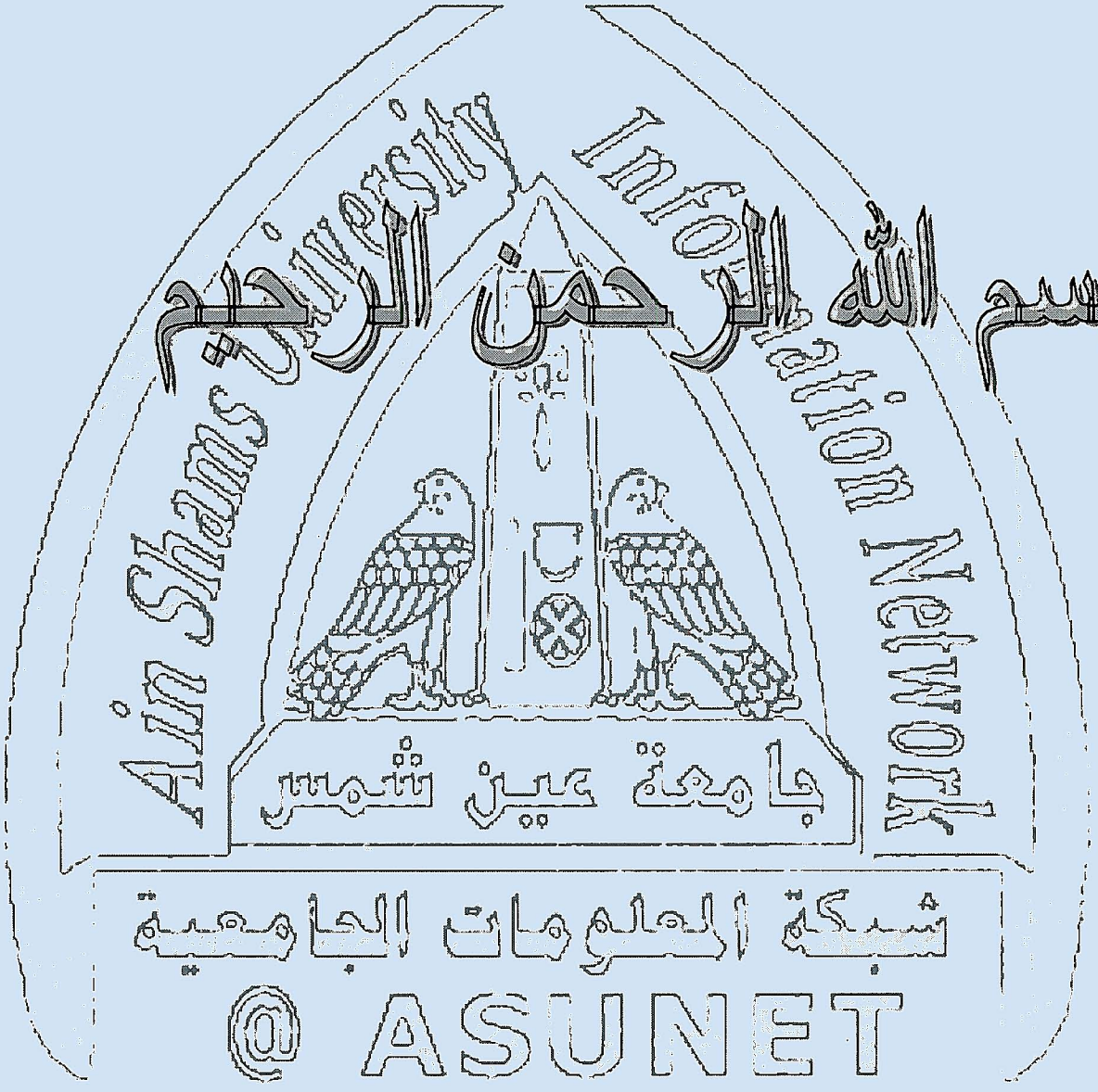
شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم



شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

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شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

بعض الوثائق الاصلية تالفة

A PHYSIOLOGICAL STUDY TO EVALUATE THE ANTIOXIDATIVE ACTIVITY OF QUERCETIN AGAINST THE ISONIAZID-INDUCED ADVERSE REACTIONS IN MALE ALBINO RATS

A THESIS

Submitted For the Ph. D. Degree in Zoology
(Comparative Physiology)

Presented By

Ghada Mohammed Abul-Fotouh Mohammed Adly

(M. Sc. in Zoology)

Faculty of Science

Cairo University

2011

Cairo University
Faculty of Science
Department of Zoology

APPROVAL SHEET

Title of the PhD Thesis

A Physiological study to evaluate the antioxidative activity of quercetin against the isoniazid-induced adverse reactions in male albino rats.

Name of the Candidate:

Ghada Mohammed Abul-Fotouh

Submitted to:
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ABSTRACT

Student Name: Ghada Mohammed Abul-Fotouh Mohammed

Title of the thesis: A Physiological study to evaluate the antioxidative activity of quercetin against the isoniazid-induced adverse reactions in male albino rats.

Degree: PhD (Comparative Physiology)

The daily administration of INH to the male albino rats for five weeks caused a marked anemia evidenced with reduced red cell count, packed cell volume and hemoglobin content. It was assorted as macrocytic hypochromic anemia, due to the oxidative stress of INH on the red cell membranes. Also, INH treatment resulted in a reduction in the total leukocyte count. As regards the biochemical parameters, INH treatment caused significant decrements in the levels of serum glucose, total protein, albumin, and HDL-cholesterol. Nevertheless, there were marked increments in the levels of serum total cholesterol, LDL-cholesterol, triglycerides and uric acid, as well as in the activities of serum aspartate aminotransferase (ASAT), alanine aminotransferase (ALAT), and alkaline phosphatase (ALP). Regarding the markers of the oxidative stress, the serum malondialdehyde (MDA) levels were increased while the reduced glutathione (GSH) content and superoxide dismutase (SOD) activity were decreased in liver of INH-treated rats. All the INH-induced hematological and biochemical alterations were markedly ameliorated in the animal group treated with Qc prior to INH. Furthermore, no side effects were observed in animal group treated with Qc alone.

Keywords: Isoniazid, Quercetin, Physiology, Hematology.

Supervisors: Signature:

1- Prof. Dr. Osama Abdel-Ghaffar Youssef Osama Abdel-Ghaffar
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Chairman of Zoology Department
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To whom I love very much

and I am in debt to them for my

happiness in this life: my great parents,

lovely sisters and faithful husband.

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