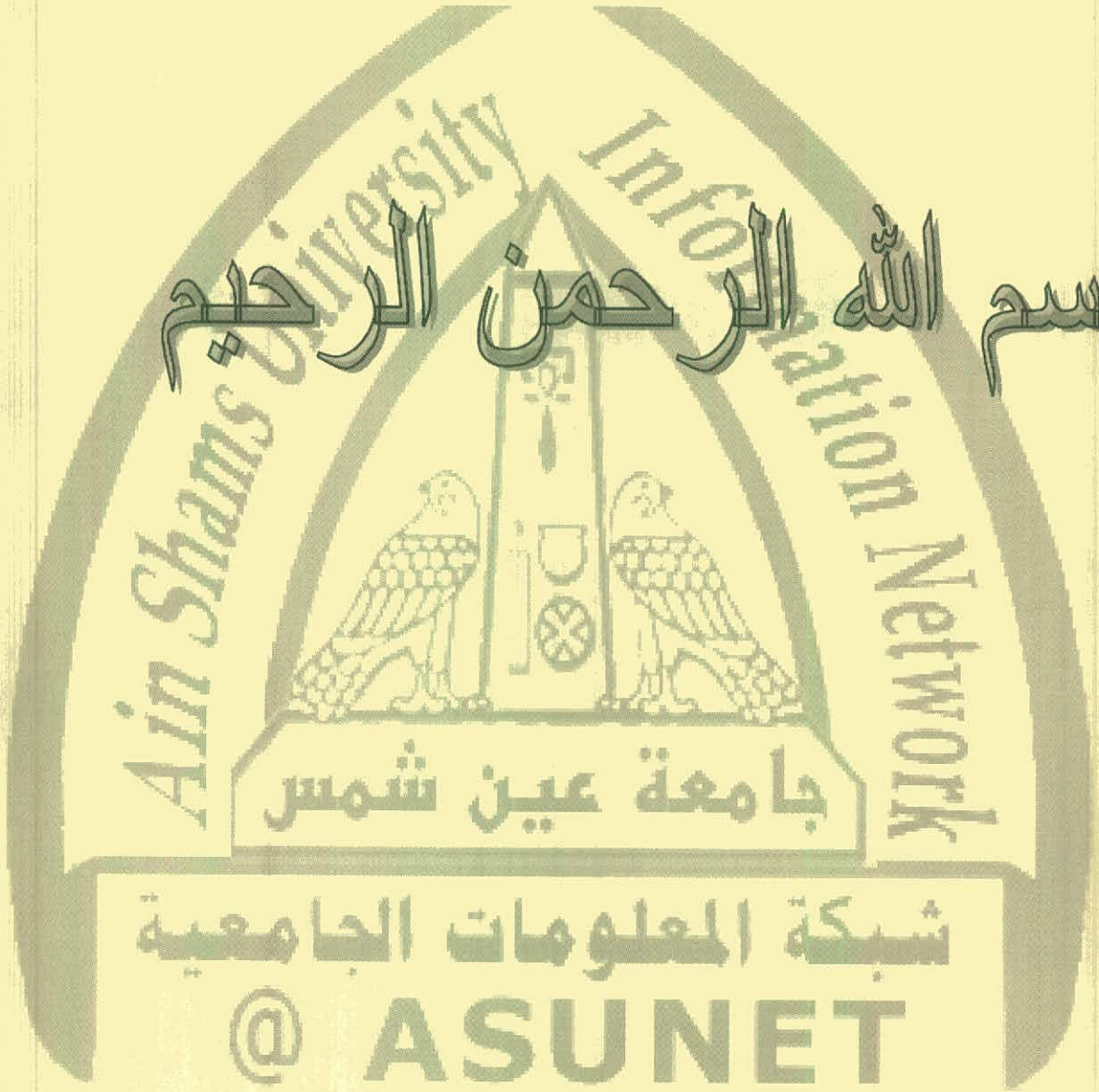
شبكة المعلومات الجامعية



بسم الله الرحمن الرحيم

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

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

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بعض الوثائـــــــق الاصليـــــة تالفـــة

بالرسالة صفحات لم ترد بالاصل

Radiation Induced Impairment of Certain Metabolic Levels in Albino Rat and Possible Control by Drugs Treatment

Thesis Presented by

Ola Aly Gharib El-Deshw

Assistant Lecturer Drug Radiation Research Department, National Center for Radiation Research and Technology

FOR THE DEGREE OF DOCTOR PHILOSOPHY
IN
SCIENCE
ZOOLOGY
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OF

Dr. G. M. Abu Sinna
Professor of physiology
Faculty of Science
Ain Shams University
Cairo

Dr. H. M. Roushdy
Emeritus Professor of
Radiation Biology
National Center for Radiation
Research and Technology,
Atomic Energy Authority,
Cairo

Dr. N. E. Amin
Professor of Biological
Chemistry
National Center for Radiation
Research and Technology,
Atomic Energy Authority,
Cairo

Dr. Laila. A. Ramadan
Assistant Professor of
Pharmacology
National Center for Radiation
Research and Technology,
Atomic Energy Authority,
Cairo

2001

بسم الله الرحمن الرحيم

يرفع الله الذين آمنوا منكم
والذين أوتوا العلم درجات

والله بما تعملون خبير

المجادلة ١١

صدق الله العظيم

To The Spirit Of MY Father

TO MY MOther

TO MY HUSband and MY SONS

All With LOVE

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ABSTRACT

Name: Ola Ali Gharib El- Deshw.

Title: Radiation Induced Impairment of Certain Metabolic levels in Albino Rat and Possible Control by Drugs Treatment.

Place: National Center for Radiation Research and Technology "Atomic Energy Authority".

This study was designed to evaluate the effect of silymarin as a hepatoprotective drug on the γ- irradiation induced hazards on certain biological functions in rats.

This investigation was conducted through analyses of certain biochemical parameters including determination of serum enzymes (AP, AST, ALT and GGTP) as well as serum cholesterol, triglycerides, urea and creatinine levels. Moreover, liver GSH content and GR and GSH-PX activities were estimated.

The results of this study showed that administration of silymarin alone did not induce significant change in any of the parameters tested in case of serum GGTP activity and urea level, where a significant decrease of their levels was recorded and a significant increase of liver GSH content occurred. Whole body γ-irradiation revealed an increase in serum AP activity as well as in liver GR and GSH- PX activities on the 1st post exposure day as compared with control values. However, 3 days after radiation exposure these parameters showed a significant decrease below the control level and persisted till the end of the experimental time except for serum AP activity that showed an increase on the 7th

post exposure day of 3 Gy dose of irradiated treated rats. A gradual increase of serum ALT, AST, GGTP activities, triglycerides content and urea concentration were observed due to irradiation throughout the experimental time. Also, irradiation caused an initial increase of total serum cholesterol followed by a progressive declining. However, serum creatinine and liver GSH content showed an initial decrease, which continued till the end of experimental time as in case of liver GSH contents or followed by a progressive increase as in serum creatinine level.

However, a remarkable restoration of the enzyme activities was observed due to treatment with silymarin either before or after irradiation. This restoration assesses the protective and ameliorative effects of silymarin, which was higher in groups treated with single oral dose of silymarin than those treated with cumulative oral dose.

Key word:

Silymarin, Gamma radiation, Liver Functions, Cholesterol, Triglycerides, Creatinine, Urea, Hepatoprotective drug, Antioxidant enzymes and GSH content