



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم



MONA MAGHRABY



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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس التوثيق الإلكتروني والميكروفيلم

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MONA MAGHRABY



Ain Shams University
Faculty of Specific Education
Home Economy Department

Chemical and Biological Effects of Some Mixtures of Plant Oils and *Thymus vulgaris* on liver Diseases

By

El Shaimaa Mohamed El sayed Omran

B.Sc.in Home Economic, Nutrition & Food Science Dept.,2009
Faculty of Home Economic, El-Menoufia University

**Athesis Submitted for Partial Fulfilment of the Requirements
of M.Sc. Degree in Home Economic Dept.,
(Nutrition & Food Science)**

Under the supervision of:

Prof. Dr. Samah Mohamed Ismael

Prof. of Food Sci. & Nutrition

Former Head of Home Economic Dept.,

Fac. of Specific Education

Ain Shams University

Dr. Oboor Mohamed Mohamed

Associate Prof. of Food Sci. & Nutrition

Home Economic Dept.,

Fac. of Specific Education.

Ain Shams University

Dr. Eman Ahmed Sultan

Lecture Endocrinology and Metabolism

National Nutrition Institute

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا سبحانك لا علم لنا إلا ما علمتنا
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- أ.د/ محمد حمدي حجاج (مناقشا خارجياً)
أستاذ التغذية وعلوم الأطعمة- كلية الإقتصاد المنزلي – جامعة حلوان
- أ.د/ سماح محمد اسماعيل (مشرفاً رئيسي ومقرر)
أستاذ التغذية وعلوم الأطعمة - ورئيس قسم الإقتصاد المنزلي سابقاً-
كلية التربية النوعية - جامعة عين شمس
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أستاذ التغذية وعلوم الأطعمة المساعد- قسم الإقتصاد المنزلي -
كلية التربية النوعية - جامعة عين شمس
- أ.م.د/ عبور محمد محمد عبد الرحمن (مشرفاً)
أستاذ التغذية وعلوم الأطعمة المساعد - قسم الإقتصاد المنزلي –
كلية التربية النوعية - جامعة عين شمس

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بتقدير

أعضاء لجنة المناقشة والحكم:

- أ.د / محمد حمدي حجاج (مناقشاً خارجياً) (.....)
- أ.د/ سماح محمد اسماعيل (مشرفاً ومقررًا) (.....)
- أ.م.د/ جيهان إبراهيم عبد الوهاب (مناقشاً داخلياً) (.....)
- أ.م.د/ عبور محمد محمد عبد الرحمن (مشرفاً) (.....)

Approval Sheet

Student Name: El Shaimaa Mohamed El sayed Omran

Title of thesis:

Chemical and Biological Effects of Some Mixtures of Plant Oils and *Thymus vulgaris* on liver Diseases

Degree: M. Sc. in Specific Education- Home Economic
(Nutrition and Food Science)

This Thesis for Master Degree has been approved by:

Prof. Dr. Mohammed Hamdy Haggag. Prof. of Nutrition, Nutrition and Food Science Dept., Faculty of Home Economics, Helwan University.

Prof. Dr. Samah Mohamed Ismael, Prof. of Food Sci. & Nutrition, Former Head of Home Economic Dept., Fac. of Specific Education, Ain Shams University.

Dr. Oboor Mohamed Mohamed, Associate Prof. of Food Sci. & Nutrition, Home Economic Dept., Fac. of Specific Education, Ain Shams University

Dr. Gehan Ibrahim Abdelwahab, Associate Prof. of Food Sci. & Nutrition, Home Economic Dept., Fac. of Specific Education, Ain Shams University

Committee in change:

Date: / /

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ABSTRACT

The present study was carried out to evaluate the chemical and biological effects of some mixtures of olive and fexdeed oils and *Thymus vulgaris* on carbon tetrachloride CCl₄ induced changes in liver enzymes of albino rats. Sixty adult male Albino rats weighing about (130±5) g were taken and divided into twelve groups, each with five rats. The first group is the negative control (-) and fed on normal diet for 10 weeks. The other groups received peritoneal injection with CCL₄ in paraffin oil (50% v/v 2 ml/kg) twice per week for 2 weeks to induce chronic damage in the liver tissue and divided into positive control group (+) which fed on normal diet with the other experimental groups (n = 10/group) were fed a Basal diet diet with different doses from thyme, flaxseed oil and olive oil for 10 weeks.

The results indicated that the positive control group (+) had a significant increase in serum ALT and AST as compared to negative control group (-) ($P \leq 0.05$). Feeding rats on different ratios of thyme, olive and fexdeed oils decreased serum AST and ALT enzymes compared to the positive control group (+). So high doses of thyme, olive and fexdeed oils could ameliorate carbon tetrachloride (CCl₄), induced liver injury in rats, suggesting that diet rich in flaxseed oil, olive oil and thyme might be a promising approach in the management of liver diseases.

Keyword: Thyme, Olive oil, Flaxseed oil, CCL₄, Albino rats, Liver enzymes, Kidney functions, Lipid Profile, Histopathology.

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LIST OF ABBREVIATIONS

AAP	: Amino- antipyrine
ADA	: Alkaline phosphatase
ALA	: α -linolenic acid
ALT	: Alanine Amino transferase
ASAP	: AST to Platelet Ratio Index
AST	: Aspartate amino transferase
ATGL	: Adipocyte triglyceride lipase
ATP	: Adenosine triphosphate
BCAA	: Branched chain amino acids
BMI	: Body mass index
BWG	: Body weight gain
Ca⁺²	: Calcium
CBC	: Complete blood count
CCl₄	: Carbon Tetrachloride
CE	: Cholesterol esterase
CHOL	: Cholesterol
CO	: Cholesterol oxidase
CLD	: Chronic Liver Disease
CRP	: C-reactive protein
CP	: Crude protein
DHS	: Demographic Health Survey
DNA	: Deoxyribo Nucleic Acid
DPPH	: α, α -diphenyl- β -picrylhydrazyl
EDTA	: Ethylenediaminetetraacetic acid
EVOO	: Extra virgin olive oil
FBS	: Fasting blood sugar
FER	: Feed Efficiency Ratio
FFA	: Free fatty acids
FO	: Flaxseed oil