

بسم الله الرحمن الرحيم



HOSSAM MAGHRABY



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



HOSSAM MAGHRABY

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
على هذه الأقراص المدمجة قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

HOSSAM MAGHRABY



بعض الوثائق الأصلية تالفة



HOSSAM MAGHRABY



بالرسالة صفحات

لم ترد بالأصل



HOSSAM MAGHRABY

**EFFECT OF DIETARY CONSTITUENTS ON
CARBOHYDRATE AND LIPID METABOLISM
IN EXPERIMENTAL ANIMALS**

B 10570

By

HESHAM FATHY ABBAS MOTTAWI

B.Sc. Agric. Sci. (Biochemistry) Ain-Shams University, (1982)

M.Sc. Agric. Sci. (Biochemistry) Cairo University, (1988)

A thesis submitted in partial fulfillment
of

The requirements for the degree of

DOCTOR OF PHILOSOPHY

In

Agriculture Science
(Biochemistry)

Department of Biochemistry
Faculty of Agriculture
Ain-Shams University

1996

2713

Approval Sheet

**EFFECT OF DIETARY CONSTITUENTS ON
CARBOHYDRATE AND LIPID METABOLISM
IN EXPERIMENTAL ANIMALS**

By

HESHAM FATHY ABBAS MOTTAWI

B.Sc. Agric. Sci. (Biochemistry) Ain-Shams University, (1982)

M.Sc. Agric. Sci. (Biochemistry) Cairo University, (1988)

This Thesis for Ph.D. Degree had been
approved by:

Prof. Dr. Fouad El-Saied Morad

Fouad E. Morad

Head of Biochemistry Department, Faculty of Medicine,
El-Azhar University.

Prof. Dr. Mohamed Mohamed Shams

M. Shams El Din

Prof. Of Biochemistry, Faculty of Agriculture,
Ain-Shams University

Prof. Dr. Mohamed Abdel-Rahman Shatla

M. A. Shatla

Prof. Of Biochemistry, Faculty of Agriculture,
Ain-Shams University

Date of examination: 30 / 1 / 1997

EFFECT OF DIETARY CONSTITUENTS ON CARBOHYDRATE AND LIPID METABOLISM IN EXPERIMENTAL ANIMALS

By

HESHAM FATHY ABBAS MOTTAWI

B.Sc. Agric. Sci. (Biochemistry) Ain-Shams University, (1982)

M.Sc. Agric. Sci. (Biochemistry) Cairo University, (1986)

Under Supervision of

Prof. Dr. Mohamed Abdel-Rahman Shatla

Professor of Biochemistry, Faculty of Agriculture

Ain-Shams University

Prof. Dr. Fawzi Amin El-Shobaki

Professor of Biochemistry and Nutrition

National Research Center

Prof. Dr. Badr Mohamed El-Saaed Abdel-Wahab

Professor of Biochemistry, Faculty of Agriculture,

Ain-Shams University

Faculty of Agriculture

Ain-Shams University

1996

ACKNOWLEDGMENT



ACKNOWLEDGMENT

I express my deep thanks and deep gratitude to *Prof. Dr. Mohamed Abdel-Rahman Shatla*, Prof. of Biochemistry, Faculty of Agriculture, Ain-Shams University, for giving every possible help, and for his continuous support and advises during this work.

I owe special gratitude and my thanks to *Prof. Dr. Fawzi A. El-Shobaki*, Prof. of Biochemistry and Nutritional Chemistry, National Research Center, for suggesting the point of research, supervising the whole work and for his consistent supervision, valuable suggestion, building scientifically and above all for his in oral support and fatherly attitude, my deep thanks for him again.

My deep thanks and gratitude to *Prof. Dr. Badr Mohamed El-Saaed Abdel-Wahab*, Prof. of Biochemistry, Faculty of Agriculture, Ain-Shams University, for giving every possible help and for his continuous support and advises during this work.

I express my thanks and deep gratitude to *Prof. Dr. Zeinab Mahmoud El-Hawary*, Prof. of Biochemistry and Nutritional Chemistry, National Research Center, for giving every possible help, and for her continuous support and advises during this work.

