

# 







شبكة المعلومــات الجامعية التوثيق الالكتروني والميكروفيلم



## جامعة عين شمس

التوثيق الالكتروني والميكروفيلم



نقسم بللله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأفلام قد اعدت دون آية تغيرات



### يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

40-20 في درجة حرارة من 15-20 منوية ورطوبة نسبية من

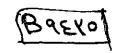
To be kept away from dust in dry cool place of 15 – 25c and relative humidity 20-40 %











# THE USE OF ANGIOTENSIN-CONVERTING ENZYME AS A BIOCHEMICAL MARKER TO DETECT CHEST DISEASES RELATED TO ENVIRONMENTAL POLLUTION

By

El-Sayed Rashad Bakr Ahmed El-Noby

M.B., B.Ch. (1984), M.Sc. Chest Diseases (1991)

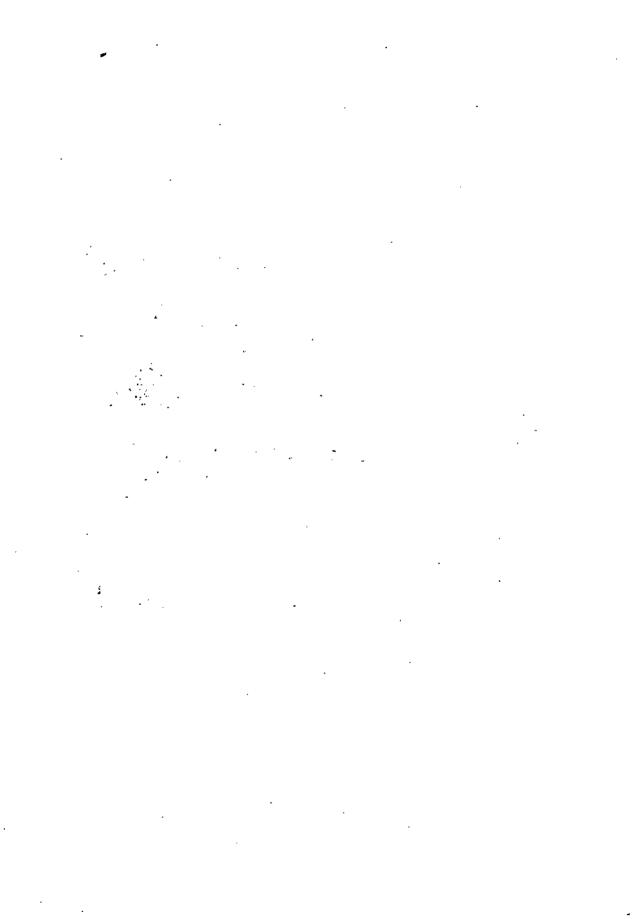
Thesis

Submitted for the degree of Ph.D

IN

**Environmental Sciences Department of Medical Sciences** 

Institute of Environmental Studies and Research
Ain Shams University
2000

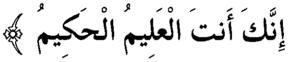




قَالُوا سُبْحَانَكَ لا عِلْمَ لَنَا إِلاَّ مَا عَلَّمْتَنَا

 إِنَّكَ أَنتَ الْعَلِيمُ الْحَكِيمُ

 مَدَقَاللَّهُ الْعَظِيمُ



[ البقرة : ٣٢]

. . 5.1 **.** . . • **.** 

## THE USE OF ANGIOTENSIN-CONVERTING ENZYME AS A BIOCHEMICAL MARKER TO DETECT CHEST DISEASES RELATED TO ENVIRONMENTAL POLLUTION

A study submitted for the degree of Ph.D. in Environmental Sciences

Medical Sciences Department

### By

El-Sayed Rashad Bakr Ahmed El-Noby M.B., B.Ch. (1984), M.Sc. Chest Diseases (1991)

### Supervised By

Prof. Dr. Mohsen Abdel-Hameed Gadallah
Professor of Community Medicine
Faculty of Medicine, Ain Shams University

Assist. Prof. Dr. Ahmed Essmat Shoman
Assist. Prof. of Occupational Medicine
Faculty of Medicine, Ain Shams University

Assist. Prof. Dr. Ibrahim Ahmed Mohamed El-Safty
Assist. Prof. of Biochemistry, Chemistry Dept.
Faculty of Education, Ain Shams University

Institute of Environmental Studies and Research Ain Shams University 2000



#### **APPROVAL SHEET**

Name: El-Sayed Rashad Bakr Ahmed El-Noby

Title: "The use of angiotensin-converting enzyme as a biochemical marker to detect chest diseases related to environmental pollution".

This thesis for Ph.D. Degree in Environmental Sciences Medical Sciences Department has been approved By:

Prof. Dr. Mohamed Awad Tag Eldin

Vice President of Ain Shams University for Postgraduate and Researches
Professor of Chest Medicine

· Prof. Dr. Mohsen Abdel-Hameed Gadallah

Professor of Community Medicine Faculty of Medicine, Ain Shams University

Brig. Med. Prof. Dr. Abou Bakr Farrag

Professor and Chairman of Community Medicine Department,

Military medical Academy, Vice President of Military Medical Academy

Date of approval: / /2000

Post-Graduate Affairs

Approval of Institute Board Approval of University Board



·
-

### Acknowledgement

Thanks to god who have lightened my path to become a humble student of a noble profession.

I would like to express my deepest gratitude and appreciation to Professor Dr. M.ohsen Abdel-Hameed Gadallah, Prof. of Community Medicine, Faculty of Medicine, Ain Shams University, for his scientific guidance, continuous encouragement, and patience without which this work would have never seen light. I will always remain greatly indebted to him for being so generous with his valuable time.

My sincere thanks and extreme gratitude to my kind teacher **Dr. Ahmed Essmat Shouman**, Assist. Prof. of Occupational Medicine, Faculty of Medicine, Ain Shams University, for his guidance in planning this study his patience and helpful encouragement and his persistent support.

It is a pleasure also, to acknowledge **Dr. Ibrahim**Ahmed M.ohamed El-Saity, Assist. Prof. of Biochemistry,
Chemistry Department, Faculty of Education, Ain
Shams University, for his sincere help and continuous
guidance in doing the practical part of this study.

Last but not least I would like to thank Prof. Dr. M. ohammed A. El-Khafif, Head of Department of Medical Science of the Institute of Environmental Studies and Research, Ain Shams University, for his kind help.

,

**€**