



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





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# شبكة المعلومات الجامعية

## التوثيق الالكتروني والميكرو فيلم

# جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
علي هذه الأفلام قد اعدت دون أية تغيرات



## يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

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



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# بعض الوثائق الأصلية تالفة



شبكة المعلومات الجامعية



بالرسالة صفحات  
لم ترد بالأصل

# **POSSIBLE NATURAL PROTECTION AGAINST RADIATION HAZARDS ON SOME MALE ENDOCRINE HORMONES**

By

**Sozan Mahmoud Ahmed**

M.B., B. Ch. Ain Shams University (1979)

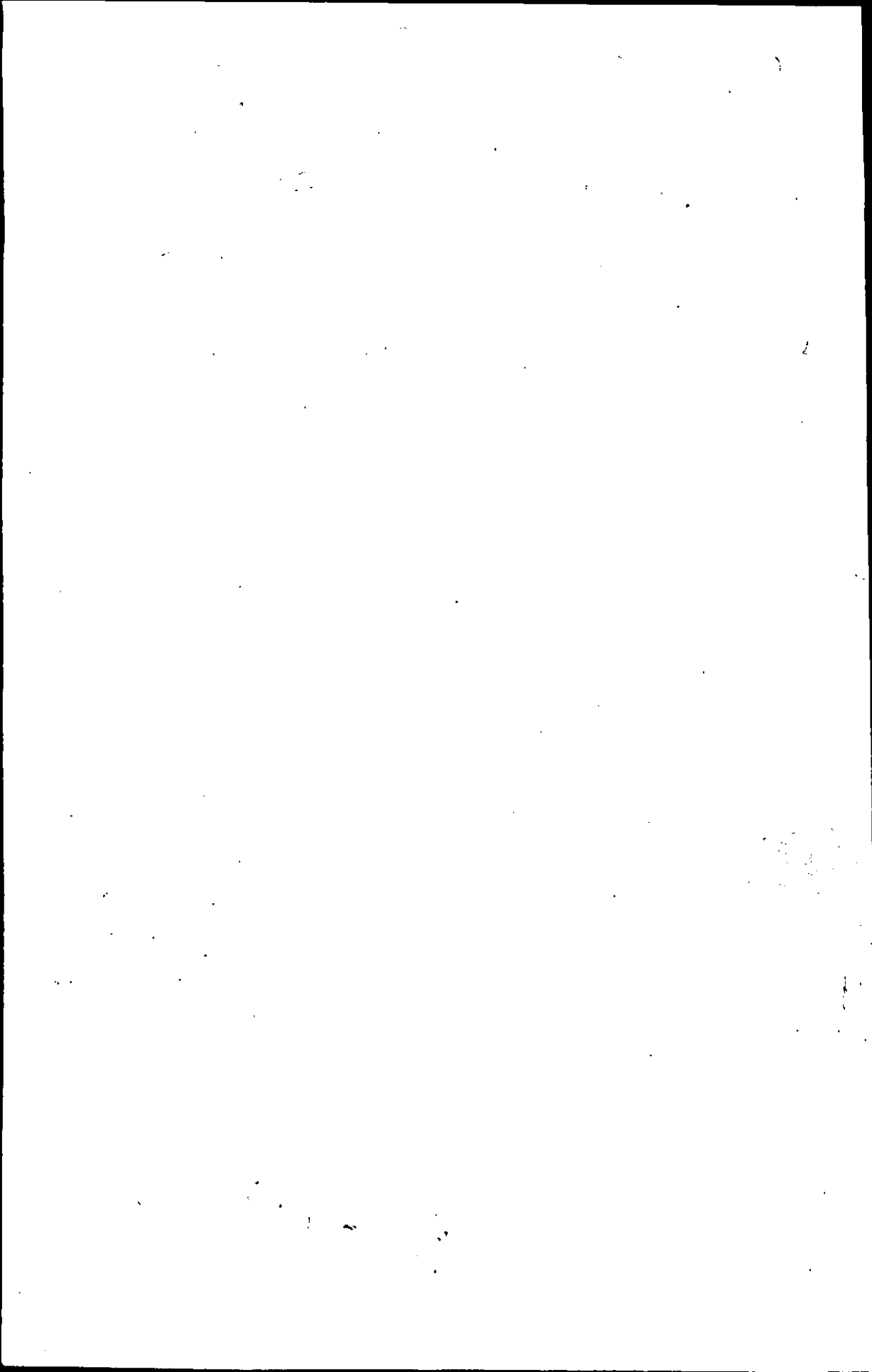
Master Degree in Clinical Pathology – Ain Shams University (1993)

**A Thesis Submitted for Doctor of Philosophy  
in Environmental Science**

Department of Medical Science  
Institute of Environmental Studies and Research  
Ain Shams University

2001

B 02.9



## APPROVAL SHEET

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This Thesis for Ph. D.Degree in Environmental Science has  
been approved by :

### Name

Signature

1- **Prof. Dr.Rashwan Mohammad Farag**

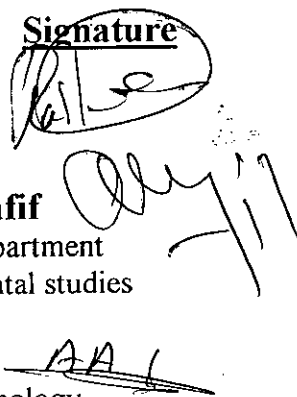
Professor of Biochemistry, Faculty of  
Medicine, Ain Shams University

2- **Prof. Dr.Mohammad Abd El Kader El Khafif**

Professor of Biochemistry and head of department  
of Medical Science, Institute of Enviromental studies  
and Research , Ain Shams University

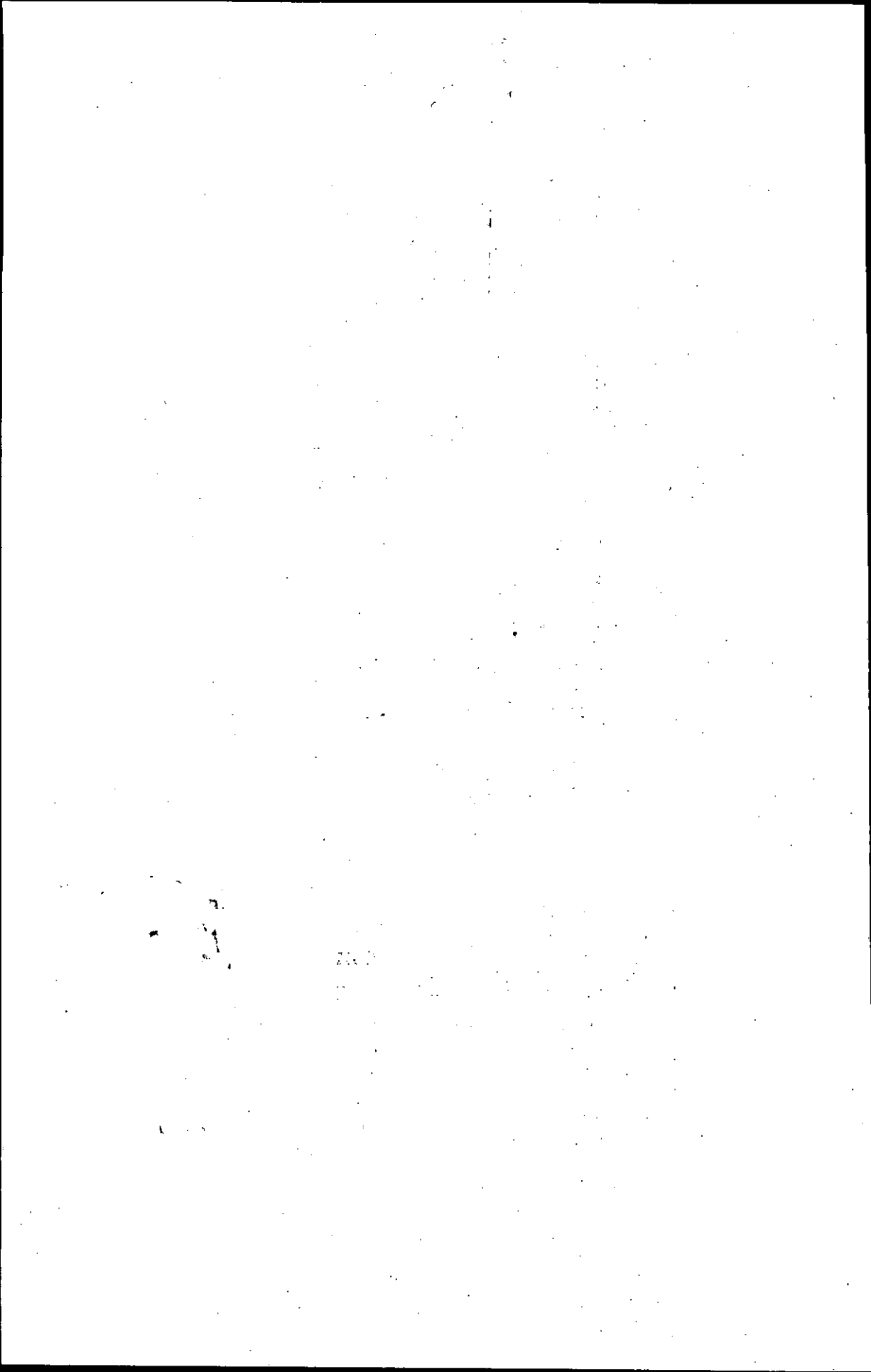
3- **Prof. Dr.Ahmed Abd El Monhim Khoriba**

Professor of Internal Medicine & Endocrinology,  
Faculty of Medicine , El Azhar University



The block contains three handwritten signatures. The first signature is enclosed in an oval. The second signature is written over the date '7/11'. The third signature is written over the initials 'AA'.





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Department of Medical Science**

## **Under the Supervision of :**

- 1- **Prof. Dr. Rashwan Mohammad Farag :**  
Professor of Biochemistry, Faculty of  
Medicine, Ain Shams University .
- 2- **Prof. Dr. Mohamed Abd El Hamid Mansour :**  
Professor of Radiobiology National Centre  
for Radiation Research and Technology.
- 3- **Prof. Dr. Abd El Sattar El Sayed Youssif El Deeb :**  
Assistant Professor of Internal Medicine  
(Endocrinology Department) Faculty of  
Medicine, Ain Shams University.



## **ABSTRACT**

The detrimental effects of accidental radiation exposure on human health have been extensively studied. As regards endocrine system, hypothalamic – pituitary – gonadal dysfunction is a frequent consequence of radiation exposure. Hormonal disturbances are often the earliest manifestation of endocrine abnormality and may be a consequence of either hypersecretion or hyposecretion of the endocrine hormones. This study focused on radiation induced hormonal alterations in order to assess administration of vitamins C and E as a potential radioprotectants against this environmental hazards. Thirty, radiation exposed persons were selected for this study. Another thirty nonexposed persons were chosen as control. All subjects were males and working in Nuclear Research Centre in Anshas. Blood samples were collected from all persons in the morning at 9:00 a.m. and serum was processed for hormonal assay using the techniques of Radioimmuno Assay. Results showed that radiation exposure was associated with significant hormonal disturbances, including an increase in serum levels of Luteinizing hormone (LH). Follicle stimulating hormone (FSH). Prolactin (PRL) and Cortisol. While testosterone levels reached their nadir. Oral administration of vitamins C (500 mg) and E (100 mg) three times daily for one month to the radiation exposed individuals led to significant improvement in hormonal levels. Therefore, this study suggests that therapeutic efforts to restore endocrinal dysfunction in radiation exposed persons might begin with antioxidant reversal of endocrinal disturbances.



## Acknowledgement

My deepest gratitude and special warmest cordial thanks to **Prof. Dr. Rashwan Mohammad Farag**, Professor of Biochemistry Faculty of Medicine, Ain Shams University, for his valuable suggestions, advices endless help and interest in the progress and performance of this work.

I wish to express my sincere thanks and deepest gratitude to **Prof. Dr. Mohamed Abd El Hamid Mansour**, Professor of Radiobiology, National Centre for Radiation Research and Technology, for his kind support, continuous encouragement, and interest during the progress of this work.

I fell very much indebted to **Prof. Dr. Abd El Sattar El Sayed Youssif El Deeb**, Assistant Professor of Internal Medicine (Endocrinology Department) Faculty of Medicine Ain Shams University, who made this research possible throughout his very close supervision and guidance.

I would like to express my deepest appreciation to **Prof. Dr. Safaa Nasr**, professor and Head of the Department of Health and Radiation Research, National Centre for Radiation Research and Technology, for her cooperation and great help and valuable directions.

My deepest appreciation and grateful thanks to **Dr. Manar Abd El Aziz Omran**, Lecturer of Biology, National Centre for Radiation Research and Technology, for here help during the practical part of this work.

Finally, I would like to express my deep gratitude to all my family for moral support to complete this work and encouragement during the whole period of research.

