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شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم



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شبكة المعلومات الجامعية



شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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***SIDE CHAIN DEGRADATION AND SOME
BIOLOGICAL TRANSFORMATIONS OF
PROGESTERONE BY FUNGI***

A THESIS

Submitted for the degree of Ph.D. in Botany (Microbiology)

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بسم الله الرحمن الرحيم

TO MY FAMILY AND MY
WIFE

**THIS THESIS HAS NOT PREVIOUSLY BEEN SUBMITTED
FOR ANY DEGREE AT THIS OR AT ANY OTHER
UNIVERSITY.**

ACKNOWLEDGMENT

Acknowledgement

I do thank God for all gifts which given me.

I wish to express my deepest appreciation and sincere gratitude to Prof. Dr. I. A. El-Kady, Professor of Microbiology and Head of Botany Department, Faculty of Science, Assiut University, not only for his suggesting and supervising this work, but also for his significant encouragement and unfailing help.

I would also like to take the opportunity to express my appreciation and very grateful to Dr. S. S. El-Maraghy Professor of Microbiology, and Dr. A. A. Zohri Assistant Professor, Botany Department, Faculty of Science, Assiut University for supervising this work and excellent research facilities.

All the members of the Botany Department and all who have given hand during the progress of this work are gratefully acknowledged.

I must also offer my gratitude to the members of my family for their help and moral support.

M. S. M. Abdel-Galil

**THE AIM OF THE PRESENT
INVESTIGATION**

THE AIM OF THE PRESENT INVESTIGATION

The clinical use of the adrenal cortical steroids originally aimed at combating and relieving the symptoms of rheumatic arthritis, anti-inflammatory conditions such as allergic, dermatologic and ocular diseases, besides they are used as anesthetics and antifertility agents. The second large group of steroid drugs of interest are male and female sex hormones. Current interest is focused on the microbial side-chain degradation of 4-dehydro-3,20-diketosteroids of pregnene series, leading to the production of androgene series which may be further used as intermediates for the preparation of the estrogens.

The objectives of the present investigation were designed to study each of the following:

- 1- It was intended to screen fungal cultures to perform the desired bioconversion as a prelude to select the most active one.
- 2- The second goal of the experimentations involved the study of some physiological factors that might lead to maximize the formation of the more useful derivatives namely: Δ^4 -androstene-17 β -ol-3-one (testosterone) and Δ^4 -androstene-3,17-dione (androstenedione).
- 3- The final experiment of this work was a trial of a large scale production of testosterone and one of the biological active derivative 11 β -hydroxytestosterone using a laboratory fermentor and the active experimental organism hoping that it might be useful in any future project pertaining the technical production of these substances which represents the most important steroid derivatives.

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