ACKNOWLEDGEMENT

All gratitude is due to Allmigtly God who guided and aided me to bring forth to light this thesis.

My respect and deepest apprectiation to Prof. Dr. M.A.El-Naghy, Head of Botany Department, and Dean of the Faculty of Science, El-Minia University, for his supervision, ultimated help, encouragment and support in conducting this thesis.

I am most grateful to Prof. Dr. A.F. Radi, Head of Botany Department, Faculty of Science, Assiut University, not only for the invaluable suggesting and superrising this work but also his human kindness.

My sincere thanks and gratitude is due to Dr. I.A. El-Kady, Assistant Professor, Botany Department, for the continuous supervision, guidance, conorete discussion of this work, excellent research facilities he provided and for his heartfull help.

I also take pleasure in thanking Prof. Dr. A. H. Moubasher, Proffessor of Mycology, Faculty of Science, Assiut University and Dean of the Faculty of Science, Qatar University, for his kind help, continuous encouragement and his efforts in presentation of this work.

I am most grateful to Dr. M.I.Abdel-Kader, Assistant Professor, Botany Department, for his interest, continuous

CONTENTS.

CONTENTS

TABLES

PREFACE

In the last 20 years, the manufacture and sales of adrenal cortical hormones and their derivatives have increased sharply. Although the clinical use for the adrenal cortical steroids originally was aimed at combating and relieving the symptoms for rheumatoid arthritis, applications have been extended to a wide variety of anti-inflammatory conditions, such as allergic, dermatologic and ocular diseases. They are also used as anaesthetics and antifertility agents. It is well known that the oestrogenic and androgenic steroids have been used with the same success in treating certain types of cancer.

Since the oxygenation of carbon atom number 11, 17 and 21 of steroids is required for anti-inflammatory activity, the introduction of these biologically necessary oxygen became the main problem economically.

When endeavouring to plan this work, two lines of approach represented themselves. Firstly, several previous communications showed that microorganisms of Rhizopus, Cunninghamella and Mucor hydroxylate strategic carbon atoms (C-11, C-17 and C-21). In this work will be tested the activity of locally isolated Mucorales using a cheap steroid source namely progesterone.