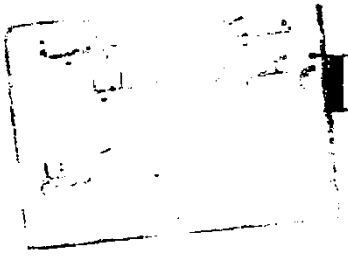
STUDIES ON THE BIOLOGICAL AND BIOCHEMICAL ACTIVITES OF CERTAIN STREPTOMYCES STRAINS ISOLATED FROM EGYPTIAN SOIL



THESIS

By

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National Research Centre

Submitted For The Degree Of

M.Sc.

MICROBIOLOGY

Ain Shams University
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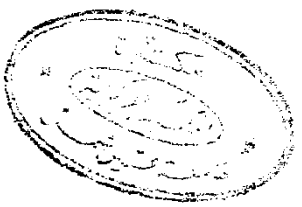

1992

ACKNOWLEDGEMENT

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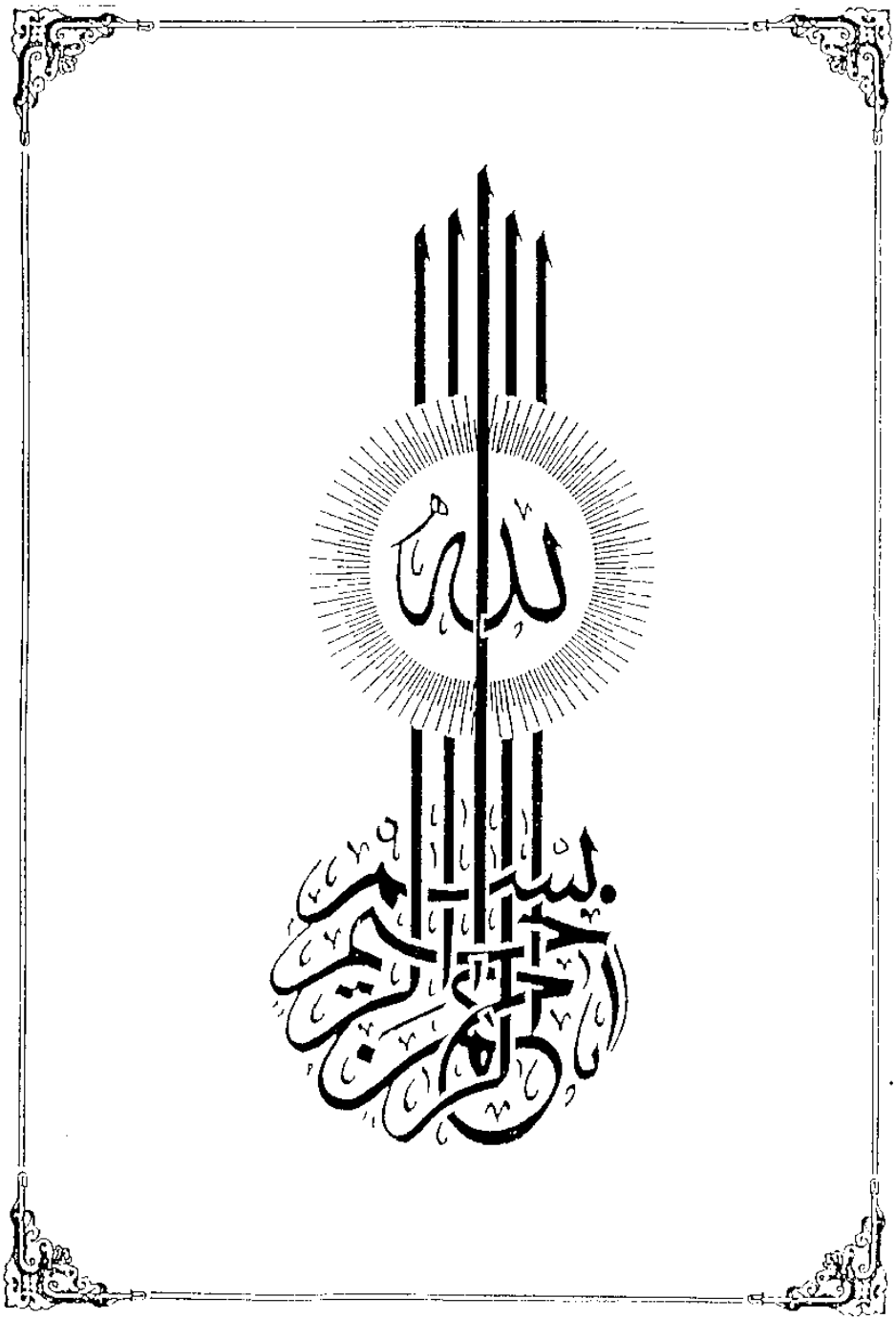

PREFACE

Species of the genus *Streptomyces* were the subject of intensive research in the world. Volunteers of new antibiotics have been carrying out screening programs for the isolation of producers of new antibiotics, among thousands of isolates, obtained from natural habitats. These efforts led to the description of many new *streptomyces* species and many of new antimicrobial substances. The majority of these substances are antibacterial antibiotics where antifungal antibiotics are less common.

The fact that antibiotics are very heterogeneous in chemistry, origin and structure makes studies of their biogenesis very difficult. With the development of streptomyces taxonomy species of *streptomyces* had been differentiated into 6 colour sections.

The present thesis deals with 43 isolates belonging to the "Gray" series. The study covers the biological, physiological and antimicrobial potentialities of the isolates.

Special interest has been paid to one single isolate that proved to be a strong producer of an antibacterial, an-

tiyeast and antifungal antibiotic. The extraction, purification, characterization and identification of this antibiotic were done.

CONTENTS

PART II

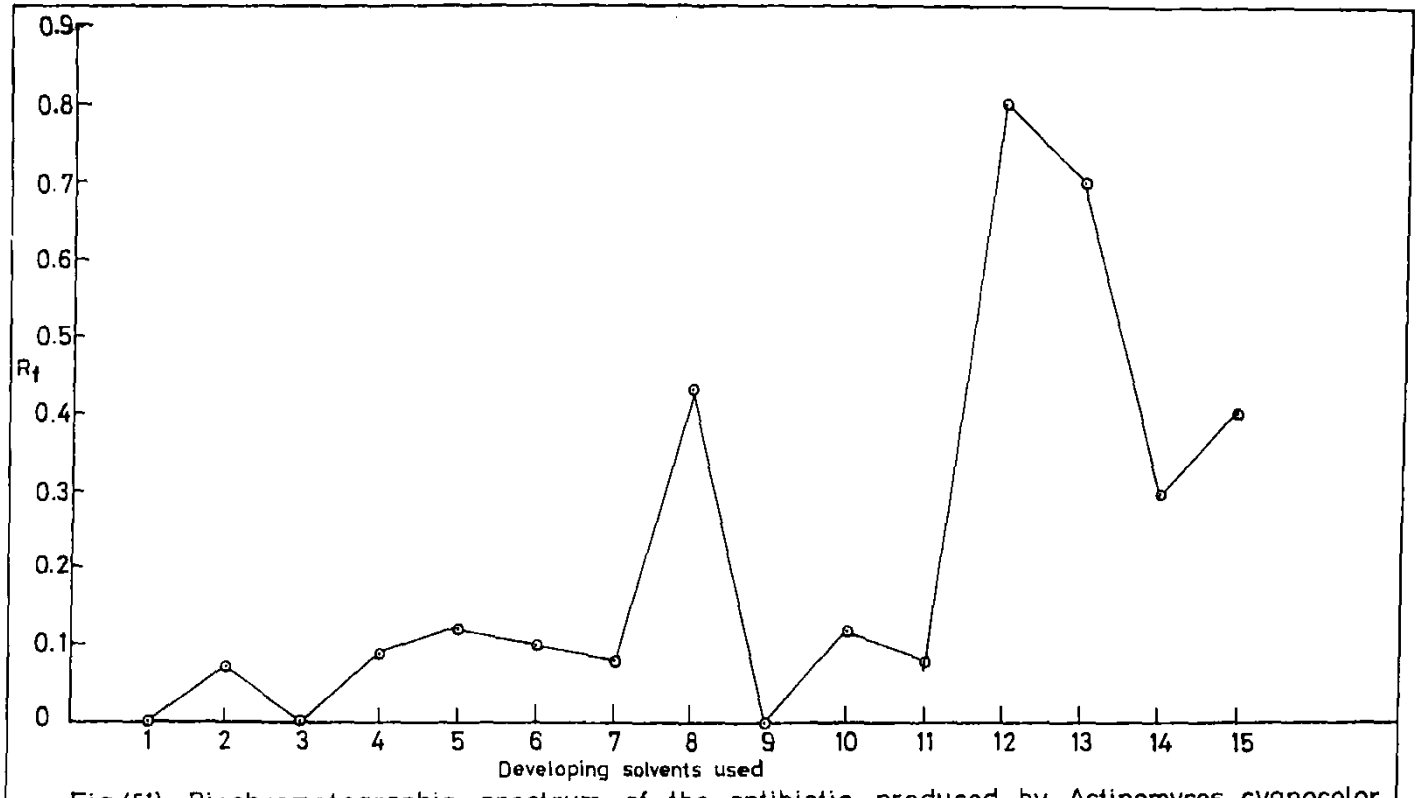

Fig.(51): Biochromatographic spectrum of the antibiotic produced by Actinomyces cyanocolor

1-Pet. ether*	2-Benzene*	3-Chloroform*
4-Carbon tetrchloride*	5-Methyl alcohol	6-Butyl alcohol*
7-Acetone	8-Diethyl ether*	9-Di-isoamyl ether*
10-Ethyl acetate*	11-Amyl acetate*	12-H_2O sat.w.butanol
13-3% NH_4Cl in H_2O	14-n-Butanol-Pyridine-H_2O (1:0.6:1)	15-Butanol-Acetic acid-H_2O (2:1:1)

* Systems sat.w. H_2O

DEDICATION

To All My Family

APPROVAL SHEET

Name : Hala Mohamed Rifaat Abd El Hamid Abd El Hady.

Title: Studies on the Biological and Biochemical Activities of Certain *Streptomyces* species Isolated From Egyptian Soil.

Thesis Approved By:

Prof. Dr. Mohamed Ramadan Abu-Shady
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Assistant Professor of Microbiology. .....

(Committe in Charge)

Date: / /1992

PART "I"

INTRODUCTION