

**UNIVERSITY TEKNOLOGI MARA**

**MICROBIAL TRANSFORMATION OF  
17 $\alpha$ -ETHINYL STEROIDS**

**AMINUDDIN BIN A AZMAN TAN**

**BACHELOR OF PHARMACY**

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## APPROVAL SHEET

I hereby recommend that the thesis prepared under my supervision by Aminuddin Bin A. Azman Tan entitled Microbial Transformation of  $17\alpha$ -Ethinyl Steroids be accepted in partial fulfillment of the requirements for the degree of Pharmacy from the Faculty of Pharmacy, UiTM.

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Date

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Dr. Syed Adnan Ali Shah

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Date

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Professor Dr. Aishah Adam  
Dean Faculty of Pharmacy

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## TABLE OF CONTENTS

	<b>Page</b>
TITLE PAGE	
APPROVAL SHEET	
ACKNOWLEDGEMENT	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	vi
LIST OF FIGURES	viii
LIST OF ABBREVIATIONS	x
ABSTRACT	xii
CHAPTER 1 (INTRODUCTION)	
1.1 Background of the study	1
1.2 Statement of problem	2
1.3 Significance of the study	2
1.4 Objectives	2
CHAPTER 2 (LITERATURE REVIEW)	
2.1 Overview of biotransformation	5
2.2 History of biotransformation	6
2.3 Advantages of biotransformation	9

## ABSTRACT

Microbial transformation or biotransformation is the modification in certain compounds using living organism such as bacterial or fungi. The main objective of present study is to investigate transformed metabolites, produced during fermentation of  $17\alpha$ -ethinyl steroids. Tibolone is a  $17\alpha$ -ethinyl steroids, was chosen as the starting compound. Two fungi, *Tricothecium roseum* and Seaweed fungus have been used for fermentation studies. The transformed products were analyzed by using Thin Layer Chromatography (TLC) and High Performance Liquid Chromatography (HPLC). Isolation of metabolite were carried through Column Chromatography. Isolated metabolite was characterize through Nuclear Magnetic Resonance (NMR) Spectroscopy and LC-MS. Based on spectral data, the transformed metabolite was identified as  $7\alpha$ -methyl- $17\alpha$ -ethynl- $17\beta$ -hydroxy-19-norandrost-4-en-3-one.