

**COMPARISON OF ANTIMICROBIAL EFFECTIVENESS
BETWEEN METHANOLIC CRUDE EXTRACT OF
THREE DIFFERENT PARTS OF *Allamanda cathartica***

NUR HAZWANI BINTI BADROL

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Dr. Ida Muryany Binti Md Yasin
Supervisor
Faculty of Applied Sciences
Universiti Teknologi MARA (UiTM)
Negeri Sembilan, Kampus Kuala Pilah,
Pekan Parit Tinggi, 72000 Kuala Pilah
Negeri Sembilan

Lily Syahani Binti Rusli
Coordinator FSG661 AS201
Faculty of Applied Sciences
Universiti Teknologi MARA (UiTM)
Negeri Sembilan, Kampus Kuala Pilah,
Pekan Parit Tinggi, 72000 Kuala Pilah
Negeri Sembilan

Dr. Aslizah Binti Mohd Aris
Head of Biology School
Faculty of Applied Sciences
Universiti Teknologi MARA (UiTM)
Negeri Sembilan, Kampus Kuala Pilah,
Pekan Parit Tinggi, 72000 Kuala Pilah
Negeri Sembilan

Date: _____

TABLE OF CONTENTS

| | PAGE |
|---|-------------|
| ACKNOWLEDGEMENTS | iii |
| TABLE OF CONTENTS | iv |
| LIST OF TABLES | vi |
| LIST OF FIGURES | vii |
| LIST OF ABBREVIATIONS | viii |
| ABSTRACT | ix |
| ABSTRAK | x |
| | |
| CHAPTER 1: INTRODUCTION | |
| 1.1 Background Study | 1 |
| 1.2 Problem Statement | 2 |
| 1.3 Significance of Study | 3 |
| 1.4 Objectives of Study | 3 |
| | |
| CHAPTER 2: LITERATURE REVIEW | |
| 2.1 <i>Allamanda cathartica</i> Plant | 4 |
| 2.2 Antimicrobial activity of <i>Allamanda cathartica</i> | 5 |
| 2.3 Pathogenic microorganisms | 6 |
| 2.4 Antimicrobial Susceptibility Testing | 10 |
| 2.4.1 Agar well diffusion method | 10 |
| 2.4.2 Broth microdilution method | 11 |
| | |
| CHAPTER 3: METHODOLOGY | |
| 3.1 Materials | 12 |
| 3.1.1 Raw materials | 12 |
| 3.1.2 Chemicals | 12 |
| 3.1.3 Apparatus | 13 |
| 3.2 Methods | 13 |
| 3.2.1 Collection of plant materials | 13 |
| 3.2.2 Collection of bacteria and fungi | 14 |
| 3.2.3 Extraction of plant materials | 14 |
| 3.2.4 Preparation of Agar | 15 |
| 3.2.4.1 Preparations of Muller Hinton Agar (MHA) | 15 |
| 3.2.4.2 Preparations of Potato Dextrose Agar (PDA) | 15 |
| 3.2.5 Isolation of bacteria and fungi | 15 |
| 3.2.6 Identifications of bacteria and fungi | 16 |
| 3.2.6.1 Gram staining | 16 |
| 3.2.6.2 Double sided sticky scotch tape technique | 16 |

| | | |
|--|--|----|
| 3.2.7 | Determination of antimicrobial activity of <i>Allamanda cathartica</i> | 17 |
| 3.2.7.1 | Agar well diffusion method | 17 |
| 3.2.8 | Method in determining Minimum Inhibitory Concentration | 18 |
| 3.2.8.1 | Broth microdilution method | 18 |
| 3.3 | Data Analysis | 20 |
| CHAPTER 4: RESULT AND DISCUSSION | | |
| 4.1 | Extraction on different parts of <i>Allamanda cathartica</i> | 21 |
| 4.2 | Antimicrobial activity of different parts of <i>Allamanda cathartica</i> crude extract | 22 |
| 4.2.1 | Antimicrobial activities using agar well diffusion Method | 22 |
| 4.2.2 | Antimicrobial activity using broth microdilution method | 34 |
| CHAPTER 5: CONCLUSION AND RECOMMENDATIONS | | 38 |
| CITED REFERENCES | | 40 |
| APPENDICES | | 44 |
| CURRICULUM VITAE | | 63 |

ABSTRACT

COMPARISON OF ANTIMICROBIAL EFFECTIVENESS BETWEEN METHANOLIC CRUDE EXTRACT OF THREE DIFFERENT PARTS OF *Allamanda cathartica*

An issue on emergence of drug resistance bacteria were become a serious problem which make the antibiotics become less effective to inhibit the growth of pathogenic microbial. The aim of this study was to screen antimicrobial properties on different parts of *Allamanda cathartica* between different types of pathogenic microbes which are *Escherichia coli* (*E. coli*), *Klebsiella pneumonia* (*K. pneumoniae*), *Staphylococcus aureus* (*S. aureus*), *Penicillium*, *Fusarium* and *Rhizopus* using its flower, stem, and leaves. This study also aim to determine the Minimum Inhibitory Concentration (MIC) value of *Allamanda cathartica* as antimicrobial. The result of this study demonstrated that the flower extract of *Allamanda* was the most effective parts to inhibit the growth of pathogenic bacteria which are *E. coli* and *S. aureus* at all concentration ranging from 100 mg/ml to 1000 mg/ml. Stem extract exhibit inhibition zones of for both bacteria at higher concentration which are 500 mg/ml and 1000 mg/ml. This study also showed that plant extract failed to displayed any antimicrobial activities towards *Klebsiella pneumonia* and all tested fungi which are *Penicillium*, *Fusarium*, and *Rhizopus*. Moreover, the Minimum Inhibitory Concentration (MIC) value of *Allamanda cathartica* flower extract for *E. coli* was 62.5 mg/ml, *K. pneumoniae* was 250 mg/ml and *S. aureus* was 125 mg/ml. Hence, it is conclude that *Allamanda cathartica* flower extract were most effective parts to inhibit the growth of *Escherichia coli* and *Staphylococcus aureus* at all concentration given. However, *Klebsiella pneumonia* and the tested fungi are not inhibited by the *Allamanda cathartica* crude extract at all concentration tested.