

**SCREENING OF ANTIMICROBIAL ACTIVITIES IN THE LEAVES OF
WILD *FICUS DELTOIDEA* GOLD LINE**

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ABSTRACT

SCREENING OF ANTIMICROBIAL ACTIVITIES IN THE LEAVE OF WILD *FICUS DELTOIDEA* GOLD LINE

The goals of this work were to obtain the solvent extraction (n-hexane, chloroform and methanol), to conduct phytochemical screening test and to determine antimicrobial activities in the leaves of *Ficus deltoidea*. The three solvent extractions with different concentrations were tested by using disc diffusion method against *Aspergillus niger*, *Candida albicans*, *Bacillus subtilis*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Staphylococcus aureus* and *Streptococcus faecalis*. The results of phytochemical screening indicated that the leaves of *Ficus deltoidea* contained flavanoids, terpenes and saponins. For antimicrobial activities, all solvent extractions inhibited the growth of bacteria especially *B.subtilis*, *E.coli*, *P.aeruginosa*, and *S.aureus* but fungi (*A.niger* and *C.albicans*) were resistant to the all the extracts.

CHAPTER 1

INTRODUCTION

1.1 Background and Problem Statement

The “Owner” of this world has created varieties of plants. Each of the plant has its own characteristic and features which give beneficial and harmful effect to mankind. Plant is one of the sources of natural product besides marine organisms or microorganism fermentation broths. There are several types of plant such as trees, shrubs, climbers, lichens, liverworts and others.

In Malaysia itself we have around 12,000 species of plants. Out of that number, more than 1000 plants species believed to have therapeutic effect (Ikram, 1995). Research on therapeutic effect of plant has been carried out since the 19th century. Since then, several antibiotics were found from various plants. These plants produce many secondary metabolites which serve as defenses against invading microorganisms (Balandrin *et al.*, 1985). Detailed research in this area could contribute more info on antimicrobial agent. Antimicrobial agent is a general term for drugs, chemical or other substances that kill or inhibit the growth of microorganism.

Several antibiotics have side effect of their prolonged used. For instance, sulphonamides can cause formation of kidney stones while clindamycin will lead