

Research article

ANTIMICROBIAL ACTIVITY OF THE ESSENTIAL OIL OF *MURRAYA KOENIGII* LEAVES

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ABSTRACT:

The present study was designed to examine *in vitro* antimicrobial and antifungal activities of the essential oil of *Murraya koenigii*. The major constituents of the essential oil were determined as pulegone (50.46%) and iso-menthone (34.53%). The antimicrobial activity of the oil was also tested against gram-positive and gram-negative bacteria and fungus using a disc-diffusion method and the minimal inhibitory concentration (MIC) values. The oil showed remarkable antibacterial activity against *Klebsiella pneumoniae* and *Staphylococcus aureus*. The essential oil exhibited also, strong antifungal activity against *Candida albicans*.

Key words: *Murraya koenigii*, essential oil, antimicrobial activity.

INTRODUCTION

The essential oils and extracts of many plant species have become popular in recent years and attempts to characterize their bioactive principles have recently gained momentum in many pharmaceutical foods processing application (Sokmen A *et al.*, 1999 & Reynolds JEF Martindale 1998). Many plants have been used for different purposes, such as food, drug and perfumery. The essential oils of the plants have been of great interest for their potential uses as alternative remedies for the treatment of many infectious diseases and pharmaceutical alternative

medicine and natural therapies (Reynolds JEF Martindale 1998) The development of bacterial resistance to presently available antibiotics has necessitated the search for new antibacterial agents (Bhattacharjee I *et al.*, 2005).

Numerous researchers showed interest for biologically active components isolated from plants and for their influence on the elimination of pathogenic microorganisms. The resistance which certain microorganisms have developed against antibiotics initiated antimicrobial investigations and different applications of essentials oils or plants against a wide range of bacteria (Gram-negative and Gram-positive)