

Antimicrobial activities of Saudi Arabian desert plants

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Abstract

The ethanol extracts of *Alhagi maurorum* Medic., *Chenopodium murale* L., *Convolvulus fatmensis* G. Kunze., *Conyza dioscoridis* (L.) Desf., *Cynanchum acutum* L., *Diploaxis acris* (Forssk) Boiss, *Euphorbia cuneata* Vahl., *Origanum syriacum* L., *Solenostemma argel* (Del.) Hayne. and *Tamarix aphylla* L.(Karst) showed significant antimicrobial activity against Gram negative, Gram positive bacteria, unicellular and filamentous fungi. However, *Tamarix aphylla* showed remarkable activity against *Aspergillus flavus* and 16, out of 19, strain of the investigated test organisms. The highest MIC value was obtained by *Tamarix aphylla* against 8, including all the filamentous fungi, of the investigated test strains. However, the extract of *Chenopodium mural* showed the best MIC against the unicellular fungi.

Keywords: medicinal plants; antibacterial activity; antifungal activity

Introduction

Natural products perform various functions, and many of them have interesting and useful biological activities (Harvey, 1999). There are more than 35,000 plant species being used in various human cultures around the world for medicinal purpose. Researchers are increasingly turning their attention to natural products looking for new leads to develop better drugs against cancer, as well as viral and microbial infections (Hoffmann *et al.*, 1993; Harvey, 1999; Srinivasan *et al.*, 2001). More than 80% of the world's population relies on traditional medicine for their primary healthcare needs. Use of herbal medicine in Asia represents a long history of human interactions with the environment. Plants used in traditional medicine contain a wide range of ingredients that can be used to treat chronic as well as infectious diseases. A vast knowledge of how to use the plants accumulated in areas where the use of plants is still of great importance (Diallo *et al.*, 1999). The medicinal value of plants lies in some chemical substances that body. The most important of these bioactive compounds of plants are alkaloids, tannins and phenolic compounds (Edeoga *et al.*, 2005).