Comparative valuation of the antimicrobial activities of *Artemisia princeps var. orientalis* and *Angelica sp.* on selected bacteria

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Abstract

The importance of screening natural preservative has increased in recent years. The natural preservatives have been used in the field of foods, cosmetics and pharmacology. In the present work, *Artemisia sp.* and *Angelica sp.*, well recognized for their effect of antimicrobial activity, were extracted by water and methanol for selecting only water-soluble compounds that can be used as additives in food and cosmetics. Antimicrobial activities of six different water extracts from shoot and leaf of *Artemisia princeps var. orientalis,* shoot and root of *Angelica gigas* and *Angelica acutiloba* were investigated by the disc diffusion method. Three gram negative bacteria (*Escherichia. coil, Agrobacterium tumefaciens and Pseudomonas putida*) and two gram positive bacteria (*Staphylococcus aureus* and *Bacillus subtilis*) were used for antimicrobial activity studies. The water-soluble compounds from methanol extract showed higher antimicrobial activity than only water extract to these bacteria. Comparative evaluation of water-soluble metabolite profiles with caffeic acid that is known as an antimicrobial compound from *Artemisia sp.* and *Angelica sp.* was performed by high performance liquid chromatography with photo-diode array detection.

References

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