ABSTRACTS OF

KAU Publications in ISI Journals

2012

Chair Mohammed Hussien Al-Amoudi for Diabetic Foot Researches

Prepared by
Deanship of Scientific Research
1. Antibacterial and Antioxidant Potency of Floral Honeys from Different Botanical and Geographical Origins ................................................................. 3

Alzahrani HA (Alzahrani, Hasan A.); Alsabehi R (Alsabehi, Rashid); Boukraa L (Boukraa, Laid); Abdellah F (Abdellah, Fatiha); Bellik Y (Bellik, Yuva); Bakhotmah BA (Bakhotmah, Balkees A.)
1. Antibacterial and Antioxidant Potency of Floral Honeys from Different Botanical and Geographical Origins

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Abstract

In order to assess their physicochemical and antioxidant properties as well as their antimicrobial potency, four varieties of honey from different botanical and geographical origins were used. The agar incorporation method was used to determine the antimicrobial potency of honeys. The total phenol content was determined by a modified Folin-Ciocalteu method and the free radical scavenging activity by the Fe3+ reducing power (FRAP) assay. Manuka honey was the most effective against Staphylococcus aureus Oxa R and S. aureus Oxa S with a Minimum Inhibitory Concentration (MIC) of 6% and 7%, respectively, whereas wild carrot honey was the most effective against Pseudomonas aeruginosa, with a MIC of 12%. Lavender honey was the least effective against all tested strains, even though was found to have the lowest pH and water content. Manuka honey had the highest content of polyphenols, with 899.09 +/- 11.75 mg gallic acid/kg, whereas lavender honey had the lowest, with 111.42 +/- 3.54 mg gallic acid/kg. A very significant correlation (r value was 0.9079 at P < 0.05) was observed between the total polyphenolic content and the Fe2+ content formed in the presence of the honey antioxidants. The differences between honey samples in terms of antibacterial and antioxidant activity could be attributed to the natural variations in floral, Sources of nectar and the different locations.
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