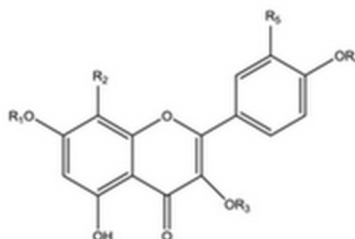


Saturday, July 16, 2011

[Study: Bee Pollen Could Ameliorate the Effects of Ageing](#)



Pollen flavonoids with significant antioxidant activity

Chemical Analysis of Greek Pollen - Antioxidant, Antimicrobial and Proteasome Activation Properties



[Chem Cent J](#), 2011 Jun 23;5(1):33

Background: Pollen is a bee-product known for its medical properties from ancient times. In our days is increasingly used as health food supplement and especially as a tonic primarily with appeal to the elderly to ameliorate the effects of ageing. In order to evaluate the chemical composition and the biological activity of Greek pollen which has never been studied before, one sample with identified botanical origin from sixteen different common plant taxa of Greece has been evaluated.

Results: Three different extracts of the studied sample of Greek pollen, have been tested, in whether could induce proteasome activities in human fibroblasts. The water extract was found to induce a highly proteasome activity, showing interesting antioxidant properties. Due to this activity the aqueous extract was further subjected to chemical analysis and seven flavonoids have been isolated and identified by modern spectral means. From the methanolic extract, sugars, lipid acids, phenolic acids and their esters have been also identified, which mainly participate to the biosynthetic pathway of pollen phenolics. The total phenolics were estimated with the Folin-Ciocalteu reagent and the total antioxidant activity was determined by the DPPH method while the extracts and the isolated compounds were also tested for their antimicrobial activity by the dilution technique.

Conclusions: The Greek pollen is rich in flavonoids and phenolic acids which indicate the observed free radical scavenging activity, the effects of pollen on human fibroblasts and the interesting antimicrobial profile...

Moreover, the interesting antimicrobial profile especially against Gram positive strains together with the other beneficial effects of Greek pollen, which is successfully introduced as a food supplement and can be easily up-taken through normal diet, could ameliorate the effects of ageing and well-being. Especially this latter mechanism, it has to be given careful consideration in the future through further scientific research.

Posted by Editor at [1:00 AM](#)  

Labels: [Bee-Collected Pollen](#)