

Effect of Egyptian Propolis on the Susceptibility of LDL to Oxidative Modification and its Antiviral Activity with Special Emphasis on Chemical Composition

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The antioxidant activity of eight Egyptian propolis samples from different localities was evaluated by the antioxidative potential and capacity of the DPPH-ESR signal, superoxide anion generated in the xanthine-xanthine oxidase (XOD) system and low density lipoprotein (LDL) peroxidation assay. As, F, Is and D samples showed the highest antioxidative capacity and potential, respectively. The El, IsR, Is, D and So samples exhibited highly significant antioxidant activity in the XOD system and in LDL peroxidation assays.

The antiviral activity of propolis samples was investigated. They showed variations in their activity; sample D induced the highest antiviral activity against Newcastle disease virus and infectious bursal disease virus.

42 Polyphenolic compounds were identified by HPLC; 13 aromatic acids, esters and alcohols were present, 29 flavonoids were identified, 6 of them being new to propolis.

Key words: LDL Peroxidation, Antiviral, Polyphenolics