

Antioxidant and Immunomodulatory Constituents of Henna Leaves

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The immunomodulatory bioassay-guided fractionation of the methanolic extract of henna (*Lawsonia inermis* L.; syn. *Lawsonia alba* L.) leaves resulted in the isolation of seven compounds; three have been isolated for the first time from the genus, namely *p*-coumaric acid, 2-methoxy-3-methyl-1,4-naphthoquinone and apiin, along with the previously isolated compounds: lawsone, apigenin, luteolin, and cosmosiin. Structural elucidation of the isolated compounds was based upon their physical, chemical as well as spectroscopic characters. Their immunomodulatory profile was studied using an *in vitro* immunoassay, the lymphocyte transformation assay. The ABTS [2,2'-azino-bis (3-ethyl benzthiazoline-6-sulfonic acid)], free radical scavenging assay depicted that all isolated compounds exhibited antioxidant activity comparable to that of ascorbic acid.

Key words: Antioxidant Activity, *Lawsonia inermis* L., Henna