

Anti-inflammatory Activity of *Verbascum sinaiticum* Grown in Jordan

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Abstract

The annual herb *Verbascum sinaiticum* Benth., (Family Scrophulariaceae), is well-known for its anti-inflammatory activity. *V. sinaiticum* grown in Jordan has been evaluated for the first time both biologically and phytochemically. Hydro-distillation of the plants aerial parts yields traces of yellow oil where 40 compounds were identified. Ten extracts were prepared and their phenolic and flavonoids contents were assessed, followed by *in vitro* and *in vivo* anti-inflammatory testing. LC-MS evaluation for the most active extract. The leaves' ethyl acetate extract treated group where comparable to the positive control group, where the percent of change in paw size was 56% versus 42% respectively, which was significantly better than the untreated group ($P < 0.0001$). The findings of the current study showed a good correlation between the antioxidant and anti-inflammatory activities of *V. sinaiticum* extracts and a promising anti-inflammatory activity.

Keywords: Anti-inflammatory, Antioxidant, GC-M, LC-MS, SPME, Total phenol and total flavonoids, *Verbascum sinaiticum*