

## Antiviral evaluation of coumarins from *Prangos ferulacea* L. (Lindl).

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**Background and Aims:** Coumarins are bioactive secondary metabolites and could be found in the roots of Umbelliferae. Some of *Prangos* species are used in traditional medicine as emollient, carminative, tonic, anti-flatulent, anthelmintic, antifungal and antibacterial agents. There are also new reports on cytokine release inhibitory and anti-HIV activities of different species of *Prangos*. *Prangos ferulacea* is found in many regions of Iran and revealed to bear good amounts of coumarins.

**Methods:** The air-dried roots of *P. ferulacea* were extracted with acetone using maceration method for 24 h and the solvent was evaporated by rotary evaporator. Repeated open column chromatography, HPLC and MPLC in normal and reverse phase chromatographies using n-heptane, ethyl acetate, hexane, methanol and water as mobile phases resulted in isolation of several coumarins. The structures of isolated coumarins were elucidated using NMR, and MS spectra. The anti-HSV and cytotoxic effect of some of them were evaluated

**Results:** From the acetone extract of *P. ferulacea*, several coumarins such as osthole, isoimperatorin, oxypeucedanin, psoralen, oxypeucedanin hydrate, gosferol and oxypeucedanin methnolate were isolated and structures elucidated. Some of them showed anti-HSV and cytotoxic effects.

**Keywords:** Oxypeucedanin; Psoralen; Oxypeucedanin hydrate; Gosferol