

Coumarins and polyacetylenes from *Prangos uechtritzi* Boiss&Hauskn roots

Gokay Albayrak^{1,2*}, Serdar Demir¹ and Sura Baykan¹

¹ Department of Pharmaceutical Botany, Faculty of Pharmacy, Ege University, Izmir, Turkey.

² Department of Pharmaceutical Botany, Faculty of Pharmacy, Izmir Katip Celebi University, Izmir, Turkey.

*E-mail: gokay.albayrak@ikc.edu.tr

Prangos sp. is an Iran-Turan element, consist of 17 species, is a member of Apiaceae family [1]. There are 30 species around the world mostly distributed in Turkey, Iran, Pakistan and India [2]. The aerial parts of the genus are commonly used as stimulant and carminative whereas roots of the plant are benefitted as aphrodisiac and wound healing agent in Anatolia. *Prangos uechtritzi* is an endemic plant to Turkey, traditionally used in various diseases including stimulant, carminative, wound healing agent and aphrodisiac in Anatolian folk medicine [3]. The purpose of this study is to isolate and elucidate the compounds from *Prangos uechtritzi* root extracts.

The plant material was collected from Taskent/Konya province, 1350 m, on June 3, 2016. Voucher specimens have been deposited in the Ege University Herbarium, Faculty of Pharmacy, Izmir, Turkey (IZEF no: 6050). Air dried roots were extracted with *n*-hexane, chloroform and methanol for 24 h, then filtered. The combined extracts were evaporated with a rotary evaporator to dryness at 40 °C. Fractionation and isolation studies of the extracts were carried out with column chromatography, preparative TLC and precipitation methods. Structural elucidation of the compounds was based on spectroscopic evidences (1D, 2D NMR (400 MHz) and MS) and reference data comparison.

13 molecules were isolated which of two are poliacetylenic compounds. Rest of them are coumarin and furanocoumarin derivatives. Suberosin, 7-demethyl suberosin, psoralen, umbelliferone, imperatorin, oxypeucedanin, oxypeucedanin hydrate, oxypeucedanin methanolate, prantschimgin, ulopterol, marmesin, falcariindiol, panaxynol were isolated for the first time from *P. uechtritzi*. Suberosin was found as major one among others in accordance with HPLC results. 7-demethyl suberosin, falcariindiol and panaxynol were isolated and elucidated for the first time from *Prangos* genus.

Through our ongoing study on *Prangos uechtritzi*, 13 compounds have been isolated and identified so far. Phytochemical experiments are going on with methanol extract of *Prangos uechtritzi*.

Acknowledgements

This study was supported by TUBITAK (The Scientific and Technological Research Council of Turkey) (Grant number: 117-S-116) and Izmir Katip Celebi University/OYP Program (Teaching Staff Training Program).

References

- [1] Güner A. *Türkiye bitkileri listesi (Damarlı bitkiler)*: ANG Vakfı. Istanbul, Turkey, 2012.
- [2] Tada Y et al. *Phytochemistry* 2002; 59:649–654.
- [3] Bulut G et al. *J Fac Pharm, Istanbul Univ.* 2014; 44:163–179.