

40

**CONSIDER THE PHYTOCHEMICAL, ANTI-BACTERIAL, ANTI-FUNGAL, ANTI-GIARDIA AND ANTIOXIDANT COMPOUNDS OF NECTAROSCORDEUM KOELZII AND NECTAROSCORDEUM TRIPEDALE**

Marzieh Rashidipour. *Young researchers and elite club, khorramabad branch, Islamic azad university, Khorramabad, Iran.*

10.1136/bmjopen-2016-015415.40

**Background and aims:** Nectaroscordeum species are belong to the Alliaceae Liliaceae family which are used as ornamental

flowers because of beautiful inflorescences. Leaves of *nectaroscordeum koelzii* and *nectaroscordeum tripedale* collected from west mountainous regions of Iran in the spring and used as flavorings in the preparation of a local bread. The aim of this study is to consider the phytochemical, anti-bacterial, anti-fungal, anti-Giardia and antioxidant compounds of *nectaroscordeum koelzii* and *nectaroscordeum tripedale*.

**Methods:** Components were extracted using methanol as solvent. Extraction, separation and measurement of the two plants by gas chromatography (GC/MS) was done. Phytochemical properties of extract, including antioxidants, anthocyanins, phenols and flavonoids were examined. Anti-bacterial and anti-fungal activity of the extracts were evaluated in two ways MIC and MBC, different concentrations of the extract were used to measure anti-Giardia.

**Results:** Most composition of essential oils of *N. koelzii* include: Di-El. Limonene (35/09%), beta-pinene (20/06%) and Trans-caryophyllene (11/32%), IC<sub>50</sub>  $\mu\text{g/ml}$  263/03, phenolic compounds 0/15%, flavonoid compounds 61/44% was reported, respectively. Most composition of essential oils of *N. tripedale* include: 2,4-decadienal (11/11%), Hexadecanoic acid (10/29%), Heptadecane (9/55%). The MIC for antibacterial and antifungal activity of extracts from both plants was variable between 625 and 10,000 per ml. In this study, the maximum power extract for anti-Giardia was at a concentration of 20 milligrams per ml. IC<sub>50</sub> 330/58  $\mu\text{g/ml}$ , phenolic compounds 0/04%, flavonoid compounds 26/88% and anthocyanin was  $4 \times 10^{-6}$ .

**Conclusion:** According to the results obtained, *N. koelzii* extract was more powerful than *N. tripedale* in biological properties, so these plants can be used as a preservative in food, pharmaceutical and cosmetics.