Two new tropolonic alkaloids from *Colchicum speciosum* Steven bulbs

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**Background and objectives:** The genus *Colchicum* belongs to the family Colchicaceae, which comprises of 19 genera, and 225 species worldwide. They have been recognized for more than 2000 years for their noticeable biological properties. The *Colchicum* species are well known for presence of tropolonic alkaloids, mainly colchicine. Colchicine, is still the drug of choice for treatment of gout, and is used for the treatment of a number of proinflammatory disorders, such as familial Mediterranean fever, and Behcet’s disease. Clinical studies have proved colchicine to possess potent anti-tumor activity. *Colchicum speciosum* Steven is an indigenous perennial herbaceous plant widely distributed in northern, central and western regions of Iran. **Methods:** In the present study, the phytochemical composition of MeOH extract from bulbs of *C. speciosum* collected from Savadkouh region, Iran was investigated by combination of HPLC-PDA-MS spectrometry and NMR spectroscopy. The fractionation of MeOH extract was carried out by partitioning on CH₂Cl₂, EtOAc and water. **Results:** The isolation and purification of CH₂Cl₂ portion by combination of reverse and normal phase chromatography resulted in the isolation, purification and identification of two new tropolonic alkaloids, compounds (¹) and (²), as well as two known compound colchicine (³) and demecolcine (⁴). Their structures were established by extensive spectroscopic methods, including 1D (¹H NMR) and 2D-NMR (COSY, HSQC and HMBC). The absolute configurations of isolated compounds were established by aid of circular dichroism. **Conclusion:** Phytochemical investigation of CH₂Cl₂ extract of *C. speciosum* by combination of HPLC, column chromatography and hyphenated spectroscopic techniques led to identification two new alkaloids with potential as lead compounds.

**Keyword:** colchicine, *Colchicum speciosum* Steven, tropolonic alkaloid