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Isolation and structure elucidation harmine alkaloid from *Rumex chalepensis* growing in IranMajid Halimi¹, Malihe Nasrabadi², Hamid Soorgi³

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Alkaloids might be found in all plant parts but tended to accumulate in storage organs of plants. Alkaloids act as stimulators, inhibitors and growth terminators. Harmine has been traditionally used for medicinal preparations in the Middle East, Central Asia and South America. Harmine is widely distributed in nature, such as in various plants, marine creatures, insects, mammals, human tissues and body fluids. Harmine have antimicrobial, antiparasitoid, antifungal, antioxidative, antitumor, antimutagenic, cytotoxic and hallucinogenic properties. Genus *Rumex* (Family: Polygonaceae) includes many edible plants which attracted the attention of many investigators because of their medicinal importance for the treatment of several diseases. Some plants of this family contains alkaloids which have been used in traditional African system medicine.

In our investigation, aerial parts of *R. chalepensis* were collected at the flowering stage from the Birjand, Iran, in Jun 2010 then alkaloids were exhaustively extracted corresponding with figure 2. The crude alkaloids combined with CHCl₃ extract was subjected to MPLC and eluted with solvent system (CH₂Cl₂/MeOH)(10:1). A single MPLC separation step performed on the alkaloid extract gave 4 fraction, to finally Fractions with similar TLC behavior were combined to yield the following one major fraction (65 mg). The structure elucidation of this compound was established by spectroscopic methods, including EI-MS, IR, ¹H, ¹³C-NMR experiments

Recent Publications

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Biography

Majid Halimi studied Chemistry at the Ferdowsi University, Iran and graduated as MS in 2002. He then joined the research group of Prof. Vahedi and Lari at the PNU University Department of Organic Chemistry, Academy of Sciences, Iran. He received his PhD degree in 2014 at the same institution.

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