

عنوان مقاله:

Antileishmanial Activity of New Steroidal Saponin Isolated from the Flowers of *Allium Austroiranicum*

محل انتشار:

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خلاصه مقاله:

Background & Objective: Plants are reservoirs of bioactive compounds, which are known to be chemically balanced, effective and least injurious as compared to synthetic medicines. The current resistance and the toxic effects of the available drugs have brought the trend to assess the antileishmanial effect of various plant extracts and their purified compound/s. Alliums are rich sources of steroidal saponins, flavonoids, and sulphuric compounds of which steroidal saponins have recently received more attention due to their important pharmacological activities. *Allium austroiranicum* is a common edible vegetable in western regions of Iran, especially in "Chaharmahal and Bakhtiari" province, where it is named "Lopo" and is considerably used as a raw vegetable, flavoring agent, and as a medicinal plant. **Materials & Methods:** The chloroform-methanolic extract was fractionated using MPLC, and the appropriate fractions were then subjected to isolation and purification of the constituents by HPLC. Structure elucidation was done using comprehensive spectroscopic methods including ¹D and ²D NMR. Antileishmanial effects of the isolated compound against the promastigotes of *Leishmania major* were evaluated using MTT method. **Results:** Phytochemical investigation of chloroform-methanol extract of the plant resulted in the isolation and identification of a Nicotianoside C related steroidal saponin and its chemical structure was determined as (۲۵S)-۵α-Spirostan-۱β,۳β-diol-۳-O-{α-L-rhamnopyranosyl-(۱→۲)-{α-L-rhamnopyranosyl-(۱→۴)}-[β-D-glucopyranoside}. Investigation of in vitro antileishmanial activity of the isolated compound, in ۱۰ and ۵۰ and ۱۰۰ μg/mL concentrations, exhibited significant leishmanicidal effects against the promastigotes of *Leishmania major*. **Conclusion:** The results established a valuable basis for further studies about *A. austroiranicum* and anti-parasitic activity of steroidal saponins.

کلمات کلیدی:

Allium austroiranicum, Antileishmania, Saponin, Structure elucidation

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