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Antitrypanosomal Triterpenoid with an ε-Lactone E-Ring from Salvia urmiensis

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Author(s) Farimani, Mahdi Moridi; Ebrahimi, Samad Nejad; Salehi, Peyman; Bahadori, Mir Babak; Sonboli, Ali; Khavasi, Hamid Reza; Zimmermann, Stefanie; Kaiser, Marcel; Hamburger, Matthias
Author(s) at UniBasel Kaiser, Marcel ; Hamburger, Matthias ; Ebrahimi, Samad ; Zimmermann, Stefanie ;
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A new triterpenoid, urmiensolide (1), was isolated from Salvia urmiensis. The structure was elucidated by a combination of 1D and 2D NMR, HRESIMS, and X-ray crystallographic analyses. The absolute configuration was established by comparison of experimental and simulated ECD spectra. Urmiensolide is the first pentacyclic triterpenoid bearing a ε-lactone E-ring. The compound showed in vitro antitrypanosoal activity with an IC50 value of 5.6 μM against the Trypanosoma brucei rhodesiense STIB 900 strain and a selectivity index of 33. A possible biosynthetic pathway of 1 from α-amyrin is proposed.
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