

4th Symposium of Young Researchers on Pharmacognosy

# BOOK OF ABSTRACTS

(ed. Judit Hohmann)

Institute of Pharmacognosy, University of Szeged, Szeged, Hungary

22–24 May 2023

Venue:

Szeged Regional Committee of Hungarian Academy of Sciences  
H-6720 Szeged, Somogyi u. 7, Szeged



<https://us06web.zoom.us/j/89528815637?pwd=dHk1ODcyaXFicWpRK0xnZXk1QU9tQT09>

Meeting ID: 895 2881 5637, Passcode: 227572

**doi: 10.14232/syrmpnpr.2023.af**

University of Szeged, Faculty of Pharmacy, Institute of Pharmacognosy  
Szeged, 2023

## 15 – SHORT LECTURE

doi: 10.14232/syrmnpnr.2023.15

Phytochemical investigations of *Euphorbia desmondii*

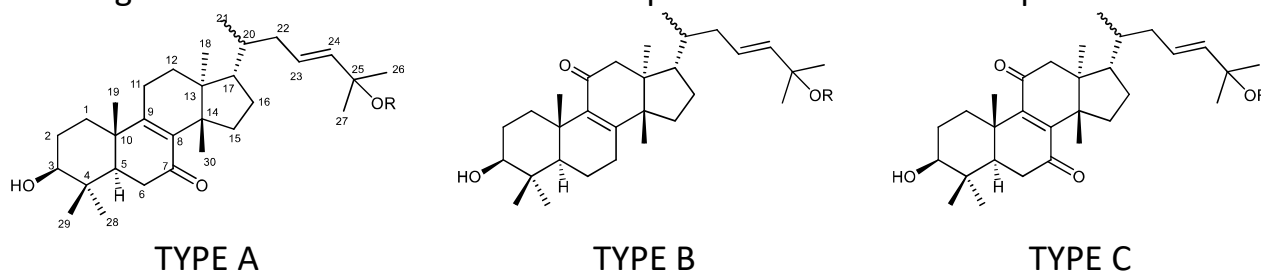
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*E. desmondii* Keay & Milne-Redh. belongs to Euphorbiaceae family [1, 2]. It is native to West and Central African regions and has a height of up to 5.5 m [1, 3]. Together with its related species, *E. kamerunica*, they are used as village palisade to protect the communities from foreign invasion [2].

The aim of the present work was to isolate biologically active compounds from aerial parts of *E. desmondii*. Powdered plant material (1950 g) was extracted with methanol by percolation. Solvent-solvent partition of water-chloroform mixture gave the organic phase, which was subjected to open column chromatography on polyamide using step gradient elution with MeOH-water mixtures (20 – 100%), to yield five fractions. 60% MeOH fraction was subjected to a series of chromatographic techniques such as normal and reverse phase vacuum liquid chromatography, normal and reversed phase HPLC, PLC, and crystallization methods. Structures of isolated compounds were established using NMR and HRMS data.

Phytochemical investigation of the 60% MeOH fraction afforded the isolation of 42 triterpenoid compounds. The triterpenoids were subdivided into three types (A, B and C) based on the presence or absence of keto group at C-7 and C-11 as shown on the figure below. 33 of the isolated compounds are new natural products.



## References

- [1] Flora of West Tropical Africa, in Kew Bull. 1955: 139.  
 [2] Annals of Missouri botanical gardens, 1994, 81: 376  
 [3] POWO (2023). "Plants of the World Online. Facilitated by the Royal Botanic Gardens, Kew. Published on the Internet; <http://www.plantsoftheworldonline.org/>

## Acknowledgements

The author would like to thank the financial support provided by the Ministry of Innovation and Technology of Hungary from NKFIH Fund, project no. TKP2021-EGA-32 and Stipendium Hungaricum Scholarship.