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BOOK OF ABSTRACTS

(ed. Judit Hohmann)

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Phytochemical investigation of a Hungarian sedge, *Carex morrowii*

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Cyperaceae is the third largest plant family among the monocotyledon plants [1]. Cyperaceae species (or sedges) occur worldwide and accumulate a large variety of secondary metabolites (e.g., flavonoids, lignans and stilbenes) with noteworthy biological activities [2,3].

The aim of our work is the isolation and structure determination of bioactive compounds of Cyperaceae species native to the Carpathian Basin. In the course of this project, 41 sedges were collected and the preliminary phytochemical and pharmacological (antioxidant, antibacterial) investigations of different extracts of the plants were carried out. Based on the results of the pharmacological screening studies, *C. morrowii* was chosen for further preparative work.

Dried, ground whole plant was extracted with methanol and after evaporation, the extract was subjected to solvent-solvent partition with *n*-hexane, chloroform ($CHCl_3$) and ethyl-acetate (EtOAc). The $CHCl_3$ and EtOAc fractions were further purified by multistep chromatographic methods, including VLC, MPLC, RPC, preparative TLC and HPLC. The structures of the isolated compounds were determined by NMR and MS measurements.

To date, two compounds from the $CHCl_3$ fraction, and six components from the EtOAc fraction, among them two new natural stereoisomer cinnamic acid derivatives have been identified. All compounds have been isolated for the first time from the plant.

References

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