PHYTOCHEMICAL INVESTIGATION OF *CAREX PRAECOX*

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Introduction

Carex praecox belongs to the family Cyperaceae, the third largest family of monocotyledonous plants, containing approximately 100 genera and 5000 species.[1] Several species of the family have been traditionally used as nutritional food or for medicinal purposes, however, the phytochemical and pharmacological investigation of biologically active compounds have been carried out only in the case of a limited number of species. According to the literature data, Cyperaceae species accumulate a variety of secondary metabolites, among them flavonoids, terpenoids, phenolic compounds, steroids, alkaloids and stilbenes.
The aim of our work is to isolate the secondary metabolites of *Carex praecox* followed by the investigation of the pharmacological effects of the pure compounds.

Results and discussion

Dried aerial parts of *C. praecox* were ground and extracted with methanol. After evaporation, the extract was dissolved in 50% methanol and then subjected to solvent–solvent partition with *n*-hexane, chloroform and ethyl acetate. The chloroformic extract was purified by column- and preparative thin layer chromatography, and HPLC methods. The structures of the isolated compounds were determined by a combination of 1D and 2D NMR, and MS measurements. As a result of the preparative work, two novel flavonoids, two novel lignans, an aldehyde and a chromene derivative were identified from the plant.

Conclusion

With the use of diverse chromatographic methods, altogether six compounds have been identified from *C. praecox*, among them four novel metabolites (two flavonoids, two lignans). All compounds have been isolated for the first time from the plant.
Isolation and structure elucidation of further compounds from *C. praecox* are going to be continued. Furthermore, pharmacological studies, especially antibacterial tests will be performed with the pure compounds.

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References

[1] D.A. Simpson, C.A. Inglis. Kew. Bull. 56 (2001) 257–360.