

Department of Biology and Ecology,
Faculty of Sciences and Mathematics, University of Niš
Institute for Nature Conservation of Serbia

**13th Symposium
on the Flora of Southeastern Serbia
and Neighboring Regions**

Stara planina Mt. 20 to 23 June 2019



**13. Simpozijum
o flori jugoistočne Srbije
i susednih regiona**

Stara planina 20. do 23. jun 2019.

**ABSTRACTS
APSTRAKTI**

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Abstracts

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Pharmacological activity of *Rumex balcanicus* Rech. F. (Polygonaceae)

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Recent studies demonstrated that *Rumex* species exhibit various pharmacological activities, such as antiinflammatory, antioxidant, anticancer, antimicrobial, but there are almost no data on pharmacological activities of Balcan endemic species *Rumex balcanicus*. Thus, the aim was to examine antioxidant activity, using DPPH and FRAP method, antimicrobial activity via broth microdilution method and α -amylase inhibitory activity using DNS reagent of aqueous and methanol extracts of roots and aerial parts of *R. balcanicus*, collected on Vlasina Lake in 2014. All tested extracts exhibited high antioxidant activity which has been correlated with the high content of polyphenols. Aqueous extracts exhibited lower activity compared to methanol extracts. Methanol extract of *R. balcanicus* roots showed the highest activity, both in DPPH (IC₅₀= 9.57 μ g/mL) and FRAP test (IC₅₀=3.98 μ mol Fe/mg of extract), while aqueous extract of aerial parts showed the lowest activity (IC₅₀= 24.73 μ g/mL; IC₅₀=2.11 μ mol Fe/mg). Only methanol extract of aerial parts showed α -amylase inhibitory activity with IC₅₀=252 μ g/mL. All extracts had low antimicrobial activity against almost all tested bacterial strains except against *Bacillus subtilis*. Positive results obtained in this study show that *R. balcanicus* contains potential as a new raw material and for the development of drugs efficient in treating diabetes.

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