



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

ABSTRACTS APSTRAKTI

**14th Symposium
on the Flora of Southeastern Serbia
and Neighboring Regions**

Kladovo 26 to 29 June 2022

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

Kladovo 26. do 29. jun 2022.

Niš-Belgrade, 2022

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Do *Lysimachia vulgaris* methanol extracts have a DNA protective potential against oxidative damage?

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Lysimachia vulgaris L. (yellow or garden loosestrife) is a medicinal herb in the family Primulaceae that has been used in the treatment of fever, ulcer, diarrhea, dysentery, and wounds. It has been known as an analgesic, expectorant, anti-inflammatory, astringent, febrifuge, and demulcent agent. The present study aims to evaluate DNA protective properties of *L. vulgaris* aboveground part and root extracts against hydroxyl and peroxy radicals-induced DNA damage. Results indicate that the DNA protective potential of extracts at various concentrations (25, 50, 100, 200, and 400 µg/mL) was in a concentration-dependent manner, increased with the concentration. These findings revealed *L. vulgaris* methanol extracts as a potent source of antioxidant agents against hydroxyl and peroxy radicals.

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***In vitro* protective potential of the *Lunaria annua* L. aerial parts and root extracts against DNA oxidative damage**

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Lunaria is a genus of flowering plants in the family Brassicaceae with five species, one of which is the *Lunaria annua* L. commonly called silver dollar, moonwort or honesty. It is harvested from the wild for local use as a source of food or materials for medicinal and cosmetic uses. A nervonic acid obtained from the *L. annua* seeds has been used as raw material in the pharmaceutical industry. The goal of the present study was to evaluate the protective effect of the aerial part and root methanol extracts of *L. annua* at various concentrations (25, 50, 100, 200, and 400 µg/mL) against hydroxyl and peroxy radicals-induced DNA damage. Both *L. annua* extracts showed DNA-protective effects in all tested concentrations, with the same ability to inhibit peroxy as well as hydroxyl radicals. These findings indicate that aerial part and root extracts of *L. annua* contain powerful antioxidant compounds that have the capacity to effectively neutralize highly reactive radicals.

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Antimicrobial activity of oak moss resinoids (*Evernia prunastri*) on certain clinical isolates

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Infections caused by bacterial strains that show resistance to a large number of antibiotics are one of the leading problems today. The aim of this scientific research is to investigate new, natural resources with potential antimicrobial activity. The antibacterial activity of oak moss resinoids (*Evernia prunastri*) was investigated on clinical isolates of *Staphylococcus aureus*, *Staphylococcus epidermidis*, *Pseudomonas aeruginosa* and *Escherichia coli*, by disk diffusion method. 10 µl of resinoid was applied to sterile disks with a diameter of 6 mm. The tested resinoid showed the most significant antibacterial activity against *Pseudomonas aeruginosa* (inhibition zone was 13 mm), slightly weaker against *Staphylococcus epidermidis* (8 mm), while the weakest against *Escherichia coli* and *Staphylococcus aureus* (7 mm). The results indicate that the tested resinoid of oak moss shows antibacterial effect on clinical isolates.