

**P1037****Antioxidant, Anti-inflammatory and Antibacterial Activity of Herb and Root Extract of Wild Edible Plant - *Rumex acetosella* L. 1753 subsp. *multifidus* (L.) Arcangeli1882**E. Svirev<sup>1\*</sup>, N. Simin<sup>1</sup>, D. Oric<sup>1</sup>, M. Francišković<sup>1</sup>, D. Mitic-Culafic<sup>2</sup>, G. Anakov<sup>3</sup>, N. Mimica-Dukic<sup>1</sup><sup>1</sup> Department of Chemistry, Biochemistry and Environmental Protection, University of Novi Sad Faculty of Sciences, Trg Dositeja Obradovica 3, Novi Sad, R. Serbia,

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*Rumex acetosella* species belongs to Polygonoideae subfamily, whose members have long been used in traditional medicine, while some of them have been used in the diet as well. That is why thorough investigation on biological activities and chemical composition of these plants is necessary. However, scientific data for this selected species are still very scarce.

In order to rate the biological potential of prepared herb and root extracts of collected sheeps sorrel plant material, a series of antioxidant (FRAP, DPPH, OH<sup>•</sup>, NO<sub>2</sub><sup>-</sup>anLP), anti-inflammatory (LC/MS/MS monitoring of five metabolites of arachidonic acid) and antibacterial (microtiter assay with resazurin as an indicator of bacterial growth, on nine bacterial strains) in vitro assays were conducted. Also, our work included quantitative analysis of 51 secondary metabolites by LC/MS/MS. Among selected compounds, vitexin and hyperoside were dominant in the herb (10.47 mg/g DE; 10.47 mg/g DE), and epicatechin (57.8 mg/g DE) in root extracts.

Based on obtained results root extract showed better antioxidant activity than herb extract in 5 of 6 assays, and also better activity compared to BHT as a common antioxidant compound. Root extract showed selective inhibitory activity against COX-1 enzyme. Examined extracts prevented the growth of three *Escherichia coli* and two *Staphylococcus* strains, but were not active against *Bacillus subtilis* ATCC6633 nor *Listeria innocua*. Significantly better antibacterial activity was shown by root extract.

In general, obtained results indicate a high potential for application of *R. acetosella* subsp. *multifidus*, especially root extract, as a source of natural, biologically active compounds.

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**P1038****Phenolic compounds profile of Brazilian wild passifloras' leaves**I.L. Gadioli<sup>1</sup>, E.S. Brito<sup>2</sup>, L.L.O. Pineli<sup>1\*</sup>, A.M. Costa<sup>3</sup>.<sup>1</sup> College of Health Sciences, Department of Nutrition, University of Brasilia, Brazil.

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Brazilian biodiversity presents several plants with potential for exploitation as functional food. Among them, wild passifloras are recognized by their antioxidant and anti-inflammatory properties, especially the leaves, possibly due to their composition regarding phenolic compounds. The objective of this study was to investigate the phenolic compounds profile of the leaves from two wild Brazilian *Passiflora* species.

Leaves of the wild *Passiflora alata* and *Passiflora setacea* were collected at Embrapa Cerrados, Brasilia, Brazil, and dried at 50°C for 5 days. The extraction of phenolic compounds was performed by infusion at 94°C for 10 minutes and filtration. Phenolic profile was assessed by using quadrupole-time-of-flight mass spectrometer (Q-TOF LC/MS) for the rapid identification of phenolics, and Waters Acquity UPLC BEH (150 x 2.1 mm, 1.7 μm) column at 40°C, flow of 0.4 mL/min and injection volume of 5 μL.

The presence of phenolic compounds was identified in *P. alata* and *P. setacea* leaves. Flavonoids such as isoorientin-2''-O-glucoside, luteolin-6-C-arabinosyl-8-C-glucoside, isovitexin-7-O-xyloside, apigenin-6-C-glucosyl-8-C-arabino-ose, orientin-4'-methyl ether were found in *P. setacea* leaves, as well as the phenolic acid dihydroxybenzoic acid pentoside. In the *P. alata* leaves, the flavonoids found were vitexin-2''-O-rhamnoside and the unknown diosmetin conjugate. The phenolic acid dihydroxybenzoic acid-O-dipentoside was also present in the phenolic composition of *P. alata* leaves. Isovitexin-2''-O-glucoside was present in both passifloras' leaves. Other studies from Passitec Network have already reported the presence of these phenolic compounds in wild passifloras. This is a first stage of the study of Brazilian wild passifloras' leaves to produce a functional infusion.

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