

# ФАРМАЦИЯ

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FIFTH NATIONAL PHARMACEUTICAL CONGRESS  
WITH INTERNATIONAL PARTICIPATION

HOTEL "HISSAR", HYSARYA - BULGARIA  
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# PHARMACIA

Dear colleagues, For more convenient search of materials, the sections in the present issue are presented with unique codes, as follows:

PL	Plenary session	
PL-1,2,3...	oral presentation	
CH	Chemical Sciences	
CH-1,2,3...	oral presentation	
CH-P1,2,3...	poster session	
ChDD	Chemometrics and Drug Desing	
ChDD-1,2,3...	oral presentation	
ChDD-P1,2,3...	poster session	
PhTSc	Pharmaceutical Technology Sciences	14.00-17.00
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PhTSc-P1,2,3...	poster session	17.00-18.00
PhP	Pharmacognosy and Phitochemistry	17.00-17.15
PhP-1,2,3...	oral presentation	
PhP-P1,2,3...	poster session	17.15-17.30
PHS	Pharmacology and Toxicology Sciences	17.30-17.45
PHS-1,2,3...	oral presentation	
PHS-P1,2,3...	poster session	17.40-18.00
PPS	Practical Pharmaceutical Sciences	18.00-19.30
PPS-1,2,3...	oral presentation	
PPS-P1,2,3...	poster session	

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**ЦЕНТРАЛНА МЕДИЦИНСКА БИБЛИОТЕКА**

1431 София, ул. „Св. Г. Софийски“ № 1  
 ☎ 952 16 45, e-mail: svetlacim@abv.bg

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#### PhP-P4. METAL ACCUMULATION AND ANTIOXIDATIVE STATUS IN SELECTED MEDICINAL PLANTS

*Darinka Gjorgieva<sup>1</sup>, Tatjana Kadifkova-Panovska<sup>2</sup>, Tatjana Ruskovska<sup>1</sup>,  
Katerina Bačeva<sup>3</sup>, Trajče Stafilov<sup>3</sup>*

<sup>1</sup>Faculty of Medical Sciences, Goce Delčev University, Krste Misirkov bb str., POB 201,  
2000 Štip, R. Macedonia; Tel.: +389 32550418, E-mail: darinka.gjorgieva@ugd.edu.mk

<sup>2</sup>Faculty of Pharmacy, Ss. Cyril and Methodius University, Skopje, R. Macedonia

<sup>3</sup>Institute of Chemistry, Faculty of Natural Sciences and Mathematics, Ss. Cyril and Methodius University,  
Skopje, R. Macedonia

**Introduction:** Plants are used in different ways, among those in medicine. Monitoring of metals in the plants is of great importance for protecting the public from the hazard of possible toxic effects and also for information about the nutrition value of the plants. Various compounds with differential antioxidant properties are found in floral resources which are considered to have high potential in context of therapeutic approaches to encounter and prevent free radical damage as that caused by metal toxicity. **Aim:** Determine the amounts of certain essential and toxic metals (Cd, Cu, Pb, Ni, Zn, Fe, Cr) and total antioxidants level in selected medicinal plants in context of therapeutic approaches. **Material and methods:** Contents of some toxic and essential metals were determined in tree medicinal plants [*Urtica dioica* L. (Urticaceae), *Taraxacum officinale* (Asteraceae) and *Matricaria recutita* (Asteraceae)], in different plant parts (leaves, stems, radix or flowers), collected from areas with different degrees of metal pollution with atomic emission spectrometry with inductively coupled plasma (ICP-AES). The ferric reducing/antioxidant power (FRAP) assay was used to measure the total antioxidants in freshly prepared infusions (0,5 g dry herbs with 50mL boiled water for 10 minutes) of above mentioned plants. Total antioxidants were expressed as mmol/L FeSO<sub>4</sub>. **Results:** All metals were found to be at high levels in samples collected from an industrial area with high degree of metal pollution compared with significantly lower results in all samples collected from unpolluted area. Similar to metals, a significant change in the total antioxidants level was recorded in two investigated groups of plants, where plants exposed to metals shows significantly lower antioxidant level. **Conclusion:** The results suggest that antioxidant defence mechanisms play a significant role in metal detoxification in plants. The analysis of heavy metal concentration in plants is necessary in the case of plants use for phytotherapeutical purposes.

#### PhP-P5. SCREENING OF SOME OXYTROPIS

*Ekaterina Ivanova*

<sup>1</sup>Faculty of Pharmacy, Departm

<sup>2</sup>S

There are three members of the genus *Oxytropis* in the Pirin Mts. Their evolutionary status is not clear. *Oxytropis urumovii* is a glacial relict species in the Pirin Mts. It is a glacial relict species in the category is "Vulnerable". *Oxytropis lova* is also a local endemism. *Oxytropis tetraploid* is a tetraploid. Its IUCN category is "Vulnerable". *Oxytropis* species, which are their close relative with a high degree of polyploid. Previous comparative and molecular techniques have answered some questions about the elucidation of the problem. Such chemotaxonomical research for the main groups of our initial screening studies in all three *Oxytropis* species: *O. urumovii* and *O. kozh* and *O. urumovii* and *O. kozh* O-β-D-(3''-methoxy)-gluc

#### PhP-P6. BIOTECHNOLOGICAL BY LEUCOJUM A...

*Ivan Ivanov<sup>1</sup>, Va*

<sup>1</sup>The Stephan Angeloff Institute of Microbiology and Biotechnologies, 139 Ruski

From time immemorial humans have used natural sources of bioactive substances. In the last decades of modern society (mainly in the last 50 years) the development of biotechnologies is of particular importance. Tissues and organs are cul