2nd INTERNATIONAL CONFERENCE ON NATURAL PRODUCTS UTILIZATION:

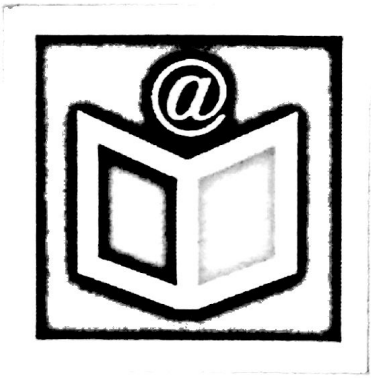
FROM PLANTS TO PHARMACY SHELF

Plovdiv 2015

14-17 October 2015

Plovdiv, BULGARIA

The 2nd International Conference on Natural Products Utilization: from Plants to Pharmacy Shelf (14–17 October, 2015), Plovdiv (Bulgaria) is organized with the financial support of the Ministry of Science and Education, Republic of Bulgaria



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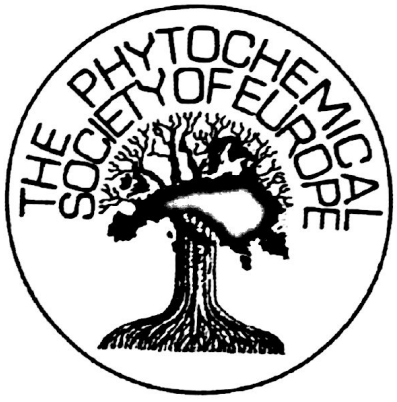
Joint meeting with the Phytochemical Society of Europe and Bulgarian Phytochemical Society



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14–17 October 2015, Plovdiv, Bulgaria

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ANTIOXIDANT AND ANTIGENOTOXIC PROPERTIES OF *DIGITALIS FERRUGINEA* SUBSP. *FERRUGINEA* ENDEMIC PLANT FROM TURKEY

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Digitalis L., popularly known as foxglove, is a member of the Plantaginaceae family. The genus *Digitalis* consists of about 36 species, nine of which grows wild in the Turkish flora[1]. Members of the genus *Digitalis* are of great medicinally importance as they contain cardiac glycosides, which can increase the force of systolic contractions and regulate heart rhythm[2]. The purpose of this study was to evaluate antioxidant and antigenotoxic properties of *D. ferruginea* aerial part methanol extract. Antioxidant capacity were evaluated using different assays including free radical scavenging (DPPH and ABTS), reducing power (FRAP and CUPRAC), phosphomolybenum, and metal chelating. Total phenolic and flavonoid contents were also determined. The antigenotoxic potential of *D. ferruginea* methanol extract from aerial parts at a concentration of 80 mg/ml was evaluated *in vivo* in the anterior midgut of *Drosophila melanogaster* using a modified alkaline comet assay against ethyl methanesulphonate (EMS)-induced genotoxicity. A statistically significant DNA damage induced by treatment with EMS was reduced in the group simultaneously treated with EMS and extract by 27.02 %. Although the reduction in % DNA in tail was not to the level of the negative control and was less than 50 % of the positive control it may be suggested that *D. ferruginea* methanol extract possess a moderate capabilities to protect DNA from damage caused by alkylating agents. Generally, *D. ferruginea* methanol extract has effective antioxidant and enzyme inhibitory properties. The presented results suggest that the *D. ferruginea* may be considered as valuable candidate for new functional foods and drug formulations development.

Acknowledgements: This work was supported by Ministry of Education, Science and Technological Development, Republic of Serbia, Grants Nos. III43004 and III41010.

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