

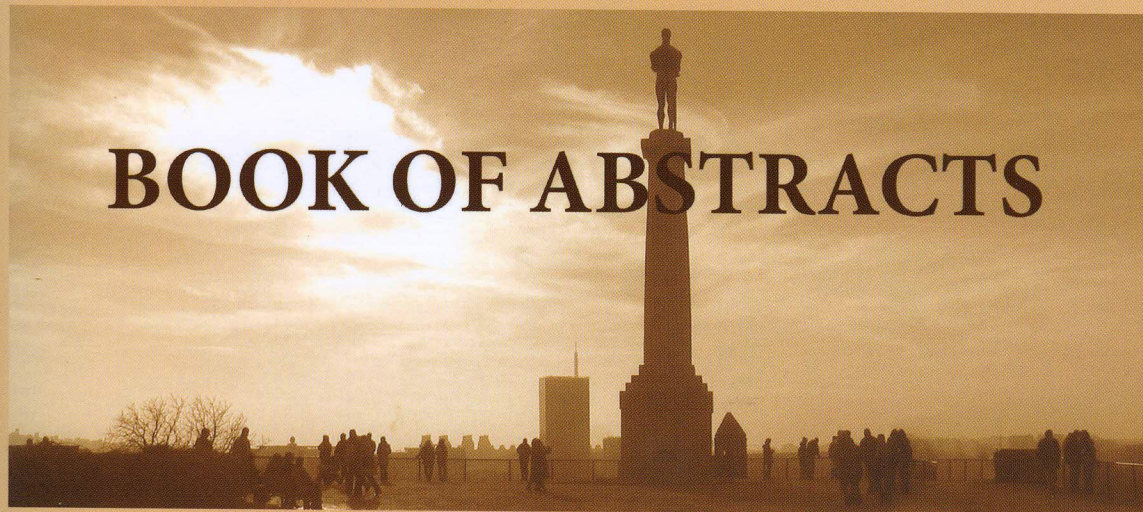
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BOOK OF ABSTRACTS

**AGE RELATED DIFFERENCES IN GLUTATHIONE METABOLISM
IN FRESHWATER SNAIL, *Viviparus acerosus*
FROM THE DANUBE RIVER**

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Data are presented in this study on the tissue glutathione (GSH) content and on the activity on the main enzymes involved in GSH metabolism (glutathione peroxidase — GSH-Px, glutathione reductase — GR and phase II biotransformation enzyme glutathione-S-transferase — GST) in the whole body of freshwater snail, *Viviparus acerosus* of two different age groups - young and adults from the Danube River. The obtained results show, that there was no differences in content of GSH in both investigating groups of snails. We observed that the activity of GR was significantly lower in adults in comparison to young groups. The activity of GST was markedly higher in adults in respect to the young snails. Moreover, GSH-Px activity did not change in different age groups, this possible indicating no variation in organic peroxide production and/or metabolism during ageing process. Ageing seems to affect the activity of GSH related enzymes and, in particular, the activities of GR and phase II biotransformation enzyme GST. Our work represents the first study of its kind and these data indicate that, in ageing freshwater snails, *Viviparus acerosus* from the Danube river the increased susceptibility to oxidative stress is partly related in alteration in glutathione metabolism.