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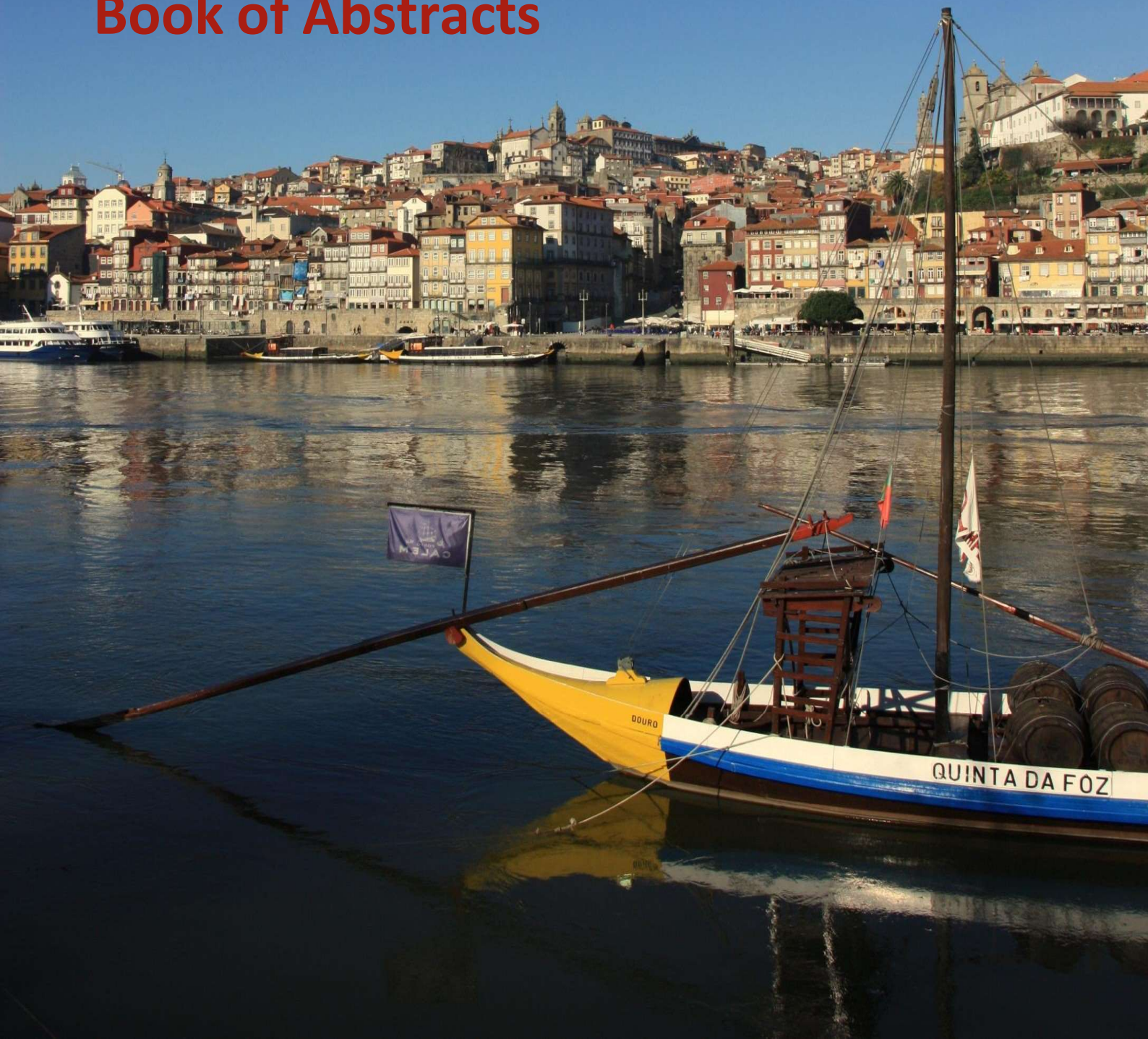

P36 *In vivo* exposure to formamide on lactate dehydrogenase, alanine aminotransferase and aspartate aminotransferase activity of *Helix aspersa*

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Formamide is produced and used as an intermediate in the chemical industry, in the production of heterocyclic compounds, pharmaceuticals, fungicides, and pesticides. It is also a solvent in the manufacture and processing of plastics. It is widely used and is released in the environment mainly through wastes. In soil, formamide have very high mobility, volatilization from moist soil surfaces is not an important fate and in the water, formamide is not expected to adsorb to suspended solids and sediment. Several biodegradation screening studies have observed significant biodegradation of formamide. To evaluate the toxicity of formamide, garden snails *Helix aspersa* were used because they satisfy all the conditions of a good biological indicator: they are easily identifiable and sampled, have a widespread distribution and their relative lack of mobility means that they are representative of a precise localization. Beyond that, their biological and ecological characteristics are well known, they strongly accumulate pollutants, and they can be easily maintained in the laboratory. The aim of this study was to assess the effects of exposure to formamide in the activity of the enzymes lactate dehydrogenase (LDH), alanine aminotransferase (ALT) and aspartate aminotransferase (AST) of the hepatopancreas of the garden snail *Helix aspersa*. Juvenile *H. aspersa* were exposed for twenty-two days to flour food contaminated with formamide. For each concentration of formamide in study (1,25; 2,5; 5 and 10 mg/mL), there were three boxes with nine snails each. The control groups (three boxes with nine snails each) were fed with no contaminated flour food. The snails were reared under a light:dark photoperiod of 14:10h and at a room temperature of 21±2ºC. At the end of the experiment, the activities of the enzymes lactate dehydrogenase, alanine aminotransferase and aspartate aminotransferase were determined. Formamide exposure decreased AST activity at the three lowest formamide concentrations. At 10 mg/mL formamide the activity of AST was higher than the activity in control. At the lowest formamide concentrations and in the control there were no differences in LDH activity. Only at the 10mg/mL there was an increase in the enzyme activity. In all the formamide concentrations the ALT activity was higher than the activity in the control, and there was a direct relation to formamide concentration. Hepatopancreas damage caused by formamide toxicity and inhibition of the activity of the enzymes are discussed as possible causes for the alterations in the activity of the enzymes LDH, AST and ALT.