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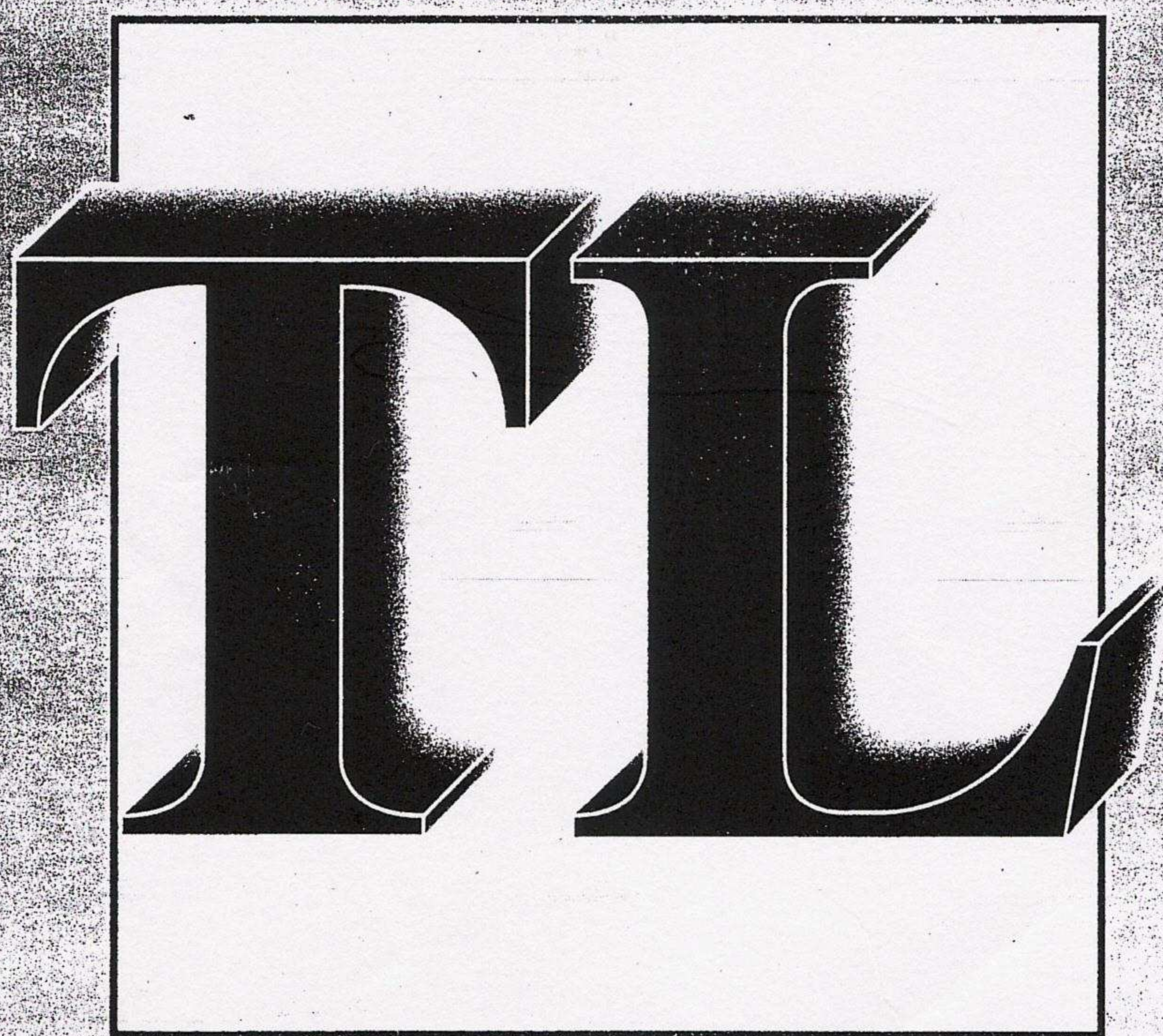
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# Toxicology Letters

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Abstracts of EUROTOX 2001, 13-16 September 2001  
Military Museum, Istanbul, Turkey

# **Toxicology Letters**

*An International Journal for the Rapid Publication of Short Reports on all Aspects of  
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pycnosis of nuclei, glomerulo-nephritis, glomerular damage and disturbances in plasma membrane of PCT and DCT. Manganese also decreased activity of some key enzymes such as alkaline and acid phosphatase, cholinesterase and glucose-6-phosphatase. Recently we designed experiments on rats as first they were treated with manganous chloride for 30 days and then exposed with methionine for a further 15 days. The observations were made on liver and kidney for similar histological and histochemical parameters. It was recorded that most lesions were disappeared or reversed towards their conditions. Therefore, it was concluded that methionine is effective to reduce manganese ions burden in both the tissues and shows therapeutic values. Histochemical and biochemical parameters especially on total lipids, proteins, carbohydrates, collagen and glycogen also supports the present results.

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#### SCREENING OF MEANS FOR DIOXIN POISONING TREATMENT ON MODEL OF RAT ACUTE 2,3,7-TRICHLORODIBENZO-P-DIOXIN INTOXICATION

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The 2,3,7-ThCDD acute poisoning of rats results to polytropic pathological changes, which in many respects are similar to 2,3,7,8-TCDD intoxication. Most of the dioxins effects are mediated by a cytosolic aryl hydrocarbon receptor, which activate cytochrome P450 1A1, 1A2, other xenobiotic-metabolizing enzymes through involving of the target genes. High effective antidotes for treatment of dioxin poisonings don't exist and the spectrum of means used in the preventive purposes, is very limited. Therefore we studied the effect of some preparations from group antioxidant ( $\alpha$ -tocopherol, retinol palmitate and ascorbic acid) and cell membrane stabilizers (salts of oxyethylenediphosphonic acid) on rat on model of acute ThCDD intoxication. Obtained results testify the most effective preparations for prevention of intoxication and the mortality of animals called OhCDD are salts of oxyethylenediphosphonic acid, and also, complex preparation ( $\alpha$ -tocopherol, retinol palmitate, ascorbic acid and activated carbon). It is possible to make a conclusion, that the treatment by the complex preparation reduced a degree of the liver lesion on 7-14 days ThCDD acute intoxication. The injection of this complex preparation substantially removed the specified developments of acute ThCDD intoxication at rats, and also promote to decrease the mortality and increase of animal's life duration.

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#### POTENT INHIBITION OF XANTHINE OXIDASE BY NOVEL 2-STYRYLCHROMONES

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2-Styrylchromones are a small group of natural heterocyclic compounds, being only known two natural compounds which were extracted from the blue-green algae *Chrysothrix taylori* in the 80 decade. Natural derivatives have demonstrated cytotoxic activity against several leukaemia cells, while other obtained by synthesis have exhibited anti-allergic, and anticancer properties. Since cancer may be spawn during the metabolism of purines by xanthine oxidase (XO), which leads to the production of reactive oxygen species, which are involved in oxidative stress and mutagenesis, ten synthetic 2-styrylchromones including a positive control, allopurinol, were tested for their effects on XO activity by measuring the formation of uric acid from xanthine. The results showed that the studied 2-styrylchromones suppress the activity of xanthine oxidase in a dose-dependent and noncompetitive manner. Some IC<sub>50</sub> values found were as low as 0.55  $\mu$ M, which, by comparison with the IC<sub>50</sub> found for allopurinol (5.43  $\mu$ M), seems to indicate promising compounds for this type of activity.

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#### PROTECTIVE EFFECTS OF TURKISH PROPOLIS ON ALCOHOL-INDUCED SERUM LIPIDS CHANGES AND THE LIVER INJURY IN MALE RATS

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Propolis is a multifunctional material used by bees in the construction and maintenance of their hives. Unlike many natural remedies, there is a substantive database on the biological activity and toxicity of propolis indicating that it may have many antibiotic, antifungal and antitumoral properties among other attributes. Although there is a report about their protective effects against atherosclerosis and alcohol-induced hepatotoxicity, there are few data about the antioxidant mechanisms of these protective action of propolis.

In present study, we determined the chemical content of *Turkish Castanea sativa* propolis used. We also investigated protective effect of propolis against alcohol induced-oxidative stress. The ethanol-propolis extract at dose of 200 mg/kg body weight per day was given by gavage to male rats for 15 days. At the end of the experiment, serum lipid levels, activities of liver enzymes and other biochemical parameters were measured.

We found that HDL level decreased and LDL level increased in the alcohol group, while HDL level increased and LDL level decreased in alcohol + propolis group. There was a decrease in cholesterol and triglyceride level in the alcohol + propolis group. In conclusion, it caused an increase in HDL level and a decrease in LDL level. We suggest that these effects are protective effects on the atherosclerosis and against alcohol-induced oxidative stress.