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Hepatoprotective activity of polysaccharopeptides from *Pleurotus ostreatus* mycelium on thioacetamide-intoxicated mice

F. M. Refaie[1], A. Y. Esmat[1*], A. S. Daba[2], W. M. Osman[3] and S. M.Taha[1]

[1] Department of Biochemistry, Faculty of Science, Ain Shams University, Cairo, Egypt. E-mail: amryesmat@yahoo.com
[2] Department of Pharmaceutical Bioproducts, Mubarak City for Scientific Research and Technological Applications, Borg El-Arab, Alexandria, Egypt. E-mail: adaba1@yahoo.com
[3] Department of Histology, Faculty of Medicine, Ain Shams University, Cairo, Egypt. E-mail: o.wesamand@yahoo.com

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ABSTRACT

The present study was undertaken to investigate the hepato-preventive and therapeutic activities of hot-water polysaccharopeptides from the culture broth of *Pleurotus ostreatus* mycelium. The therapeutic regimen represented by intraperitoneal administration of polysaccharopeptides (25 mg/kg, 3 times per week, for 5 consecutive weeks) to mice after thioacetamide intoxication (200 mg/kg, 3 times per week, for 5 consecutive weeks) was more effective than before thioacetamide intoxication (preventive regimen). The preventive regimen caused less leakage of alkaline phosphatase, less pronounced increase in hepatic malondialdehyde concentration, less notable reduction in hepatic total protein, RNA and DNA contents, and in contrast increased hepatic superoxide dismutase, glutathione peroxidase and glutathione reductase activities. Amelioration of serum levels of alanine and aspartate aminotransferase activities, total protein, as well as hepatic levels of triglycerides, and catalase activities was observed. Post-treatment of liver-injured mice with polysaccharopeptides normalized all the studied parameters, whereas signifi-

* Corresponding author: Amr Y. Esmat, Department of Biochemistry, Faculty of Science, Ain Shams University, Abbassia, Cairo, Egypt.

cantly elevated serum total protein and γ-globulin levels, as well as hepatic antioxidant enzymes activity. Histological examination of the liver tissues showed that polysaccharopeptides alleviated the thioacetamide-induced alterations, notably inflammation, steatosis, necrosis and fibrosis, especially in the therapeutic regimen.

Key words: ***Pleurotus ostreatus*****, polysaccharopeptides, thioacetamide, toxicological studies, biochemical studies, histological studies, mice.**