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**Antidiabetic properties of aqueous suspension of commercial preparation of *Coprinus comatus***

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Modern studies have been showed that mushroom preparations of *Coprinus comatus* have positive pharmacotherapy effects such as enhancement of insulin secretion from pancreatic beta cells, promotion of glucose and lipid metabolism, improvement of cellular sensitivity to insulin. Studies which observed the incidence of diabetes mellitus in Serbia, have found that the most frequent incidence is in the region of Vojvodina.

Bearing in mind that diabetes mellitus and its consequences are one of the leading medical problems in Serbia the research was conducted to examine possible positive effects of commercial preparation of *C. comatus* on disorders that follow diabetes mellitus.

The experiment was performed on albino Wistar rats of both sexes, older than 3 months who were randomly divided into experimental and control groups, each with 6 rats. The experimental groups of animals were treated with an aqueous suspension of commercial preparation of mushroom *C. comatus* for 7 days in dose of 1,67 g/kg. Antidiabetic activity was assessed after induced hyperglycaemia by giving orally anhydrous glucose (3 g/kg), subcutaneously adrenaline (0,2 mg/kg) and intraperitoneally alloxan (150 mg/kg). The hepatoprotective effect was evaluated after intraperitoneal administration of carbon tetrachloride (2 ml/kg) by measuring alanine transaminase and aspartate transaminase blood concentration. On the last day of experiment animals were anesthetized with 25% urethane solution in dose of 5 ml/kg and sacrificed by cardiopunction in order to collect blood and tissues for further analysis. Lipid-reducing activity was determined by measuring the concentration of lipids in the blood and by calculating the index of atherosclerosis. After evaluation of the effects of *C. comatus* on body weight, there was no statistically significant difference compared to control. In the model of alloxan-induced hyperglycaemia, 7-day treatment with the mushroom preparation significantly reduced the value of glucose in the blood of animals ( $13.98 \pm 6.45$  :  $23.14 \pm 6.42$ ). By observing the effects on the lipid status of animals, significant increase of HDL lipoproteins in animals treated only with *C. comatus* was shown ( $0.77 \pm 0.11$  :  $0.93 \pm 0.11$ ). At the end it was shown that mushroom is not fully able to protect the liver from acute damage induced with CCl<sub>4</sub>.

On the basis of the results we can conclude that treatment with the mushroom *C. comatus* showed positive pharmacological effects on experimental animals.