

Title: RATS WITH INDUCED DIABETES CAN BE CONTROLLED WITH POLYSACCHARIDE EXTRACTED FROM *TREMELLA FUCIFORMIS* BERK

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Abstract:

Tremella fuciformis is probably one of the most beautiful fungi growing in subtropical and tropical areas, or even temperate zones. It's commonly known as the "white auricularia" or "white jelly fungus". Conidia from the fungi can grow in solid medium contained sorghum seeds and produced polysaccharides (PS). The objective of present work was used the polysaccharide in rats submitted a streptozotocin and evaluate the effect on the glucose, cholesterol, HDL, triglycerides, glutamic-pyruvic transaminase (GPT) and urea level in the plasma. In polysaccharide was determined beta-glucan and total sugar. Concentration used for animals was 1mmol and 2mmol of EPS. Male Wistar rats was separated in groups where: 1) diabetes group; 2) diabetes group received 1mmol or 2mmol from polysaccharide; 3) control group; 4) control group received 1mmol or 2mmol from polysaccharide. All groups received commercial pellet and water for 35 days. Weight and blood glucose levels was measured once a week and after the period from experiment the animals were euthanized and blood was collected for the analysis of cholesterol, HDL, triglycerides, GPT and urea. Results indicate that PS is beneficial in control of DM1 when the level from blood glucose is 130mg/dL accomplished by reducing cholesterol, triglyceride, GPT, urea and increasing HDL cholesterol. When the blood glucose level is above 200mg/dL the action of EPS in reducing is not satisfactory. Conclusion: Polysaccharide from *T. fuciformis* can control diabetes until to level of 200mg/dL with reduction of cholesterol, triglyceride and others.

Key words: polysaccharide, *Tremella fuciformis*, diabetes mellitus

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