P86

Effects of Edible *Lentinus tuber-regium* on Obesity and Lipid Metabolism in Serum of SD Rats

Jeung-Min Kim*, Soo-Hyun Park Dae-Ik Kim, Jin-Ho Choi, Chang-Mok Kim[1] and Gwang-Po Kim[2]

Lab. of Biochemistry, Faculty. of Food Science & Biotechnology, Pukyong National University; [1]Dept of Biochemistry, Korean Institute of Industry and Technology Information; [2]Dept. of Applied Microbiology, National Institute of Agricultural Science & Technology, RDA, Suwon 441-707, Korea

Obesity and lipid metabolism studies using SD-rats were carried out on an edible Nigerian mushroom, namely, *Lentinus tuber-regium* (Fries) Singer. Experimental diets prepared with *Lentinus tuber-regium* (LTR) instead of carbohydrates were fed to SD rats for 6 weeks. Body weights gain were meaningfully decreased (3.2% and 29.3%, respectively) In LTR-50 and LTR-100 groups, whereas food intakes were significantly increased (24.5% and 40.7%, respectively) compared with control group. Feed efficiencies were significantly decreased (22.2% and 49.8%, respectively) in these two LTR groups, whereas gross efficiencies (GE) were meaningfully increased (9.9% and 10.4%, respectively) compared with control group. The ratios of diet intake (DI)/metabolic body size (MBS) were remarkably increased (50.3% and 136.1%, respectively) in these groups. Triglyceride and LDL-cholesterol levels were significantly decreased (22.4% and 32.6%, 8.3% and 12.7%, respectively) in these two groups, but HDL-cholesterol levels were desirably increased about 3~10% in LTR-added groups. Atherogenic indices (AIs) were significantly decreased about 8~13% in LTR-added groups compared with control group. These results suggest that an edible mushroom, *Lentinus tuber-regium* may be inhibit obesity in above 50%-LTR by increasing a diet intake, GE and DI/MBS ratio, but may also effectively modulate a chronic degenerative diseases by improving a lipid metabolism.