Evaluation for Toxicology and Mutagenicity of *Tremella* Polysaccharide Extracted from *Tremella fuciformis*, Berk

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**Abstract**


According to the Chinese medicine records, *Tremella fuciformis* possesses some beneficial effects to lungs and stomach. Our previous study has showed that *Tremella* polysaccharides (TP) extracted from fruiting bodies of *T. fuciformis* and were effective in relieving symptoms of constipation. Present study was conducted to determine TP for toxicity in rats using acute oral toxicity test and mutagenesis in bacterial cultures of *Salmonella typhimurium*, using Ames test. Each rat (SD strain) was gavaged with TP at a dose of 5 g/kg body weight and then observed daily for a period of 14 days. Results showed that, compared to controls, all TP-treated rats survived after 14 days and no significant difference in body weight between treated and controls. There was no significant difference between control and TP-treated rats in hematological and biochemistry parameters, white blood cell and pathology of main internal organs. The rat feeding trial suggests that the acute oral LD$_{50}$ value of TP is greater than 5 g/kg body weight. Furthermore, Ames test of TP on *Salmonella typhimurium* strains TA98, TA100, TA102, TA1535 and TA1537 showed that, either in the presence or absence of S9 TP treatment caused no reverse mutagenicity in all five strains tested, compared to negative control. In conclusion, Tremella polysaccharides are safe based on the evidence of no acute oral toxicity on rats and no reverse mutation of strains of *Salmonella typhimurium*.

**Key words:** *Tremella fuciformis*, Polysaccharides, Rats, Acute oral toxicity, *Salmonella typhimurium*, Ames test.

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