



Lack of carcinogenicity of lyophilized *Agaricus blazei* Murill in a F344 rat two year bioassay

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Abstract

The Brazilian mushroom *Agaricus blazei* Murill has antimutagenic, antioxidant, immunostimulatory and antitumorigenic activities, and is increasingly consumed as a health food worldwide. We undertook the present study to evaluate the chronic toxicity and oncogenicity of *A. blazei* Murill in F344 rats. To establish a no-observed-adverse-effect level (NOAEL), four treatment groups of 100 rats each (50 males and 50 females) were fed a powder diet containing lyophilized *A. blazei* aqueous extract at 0, 6250, 12,500, and 25,000 ppm for up to 2 years. During this period, there was no remarkable change in mean body weight, body weight gain, hematologic or serum chemistry parameters, or absolute or relative organ weights in control or treatment groups. Mortality in male treatment groups (26%, 16%, and 30%), however, was significantly lower than in controls (48%). Histopathological studies showed no increased incidence of tumors in any treatment group, and total tumor incidence across all groups was comparable to historical data. In conclusion, an *A. blazei* Murill lyophilized powder diet even at 25,000 ppm (1176 mg/kg b.w./day for male rats and 1518 mg/kg b.w./day for female rats) resulted in no remarkable carcinogenic effects in F344 rats over a 2-year period. Therefore, the dietary NOAEL is 25,000 ppm.

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長期発がん性試験

2年間に及ぶ長期発がん性試験を実施しているアガリクスは協和のアガリクス茸のみです。

G L P (Good Laboratory Practice) 基準に則り実施された本試験結果は2008年Food & Chemical Toxicologyという毒性学の雑誌に掲載され、厚生労働省及び内閣府食品安全委員会での評価資料として提出・受理されています。