P9

Suppressive Effect of Administrated Glutathione-Enriched *Saccharomyces cerevisiae* FF-8 on the Oxidative Stress in Alcoholic Fatty Liver

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Glutathione is a well known chemotherapeutic agent for liver disease and is a popular nutritional supplement in the United States. Previous our studies reported the suppressive effects of glutathione-enriched *Saccharomyces cerevisiae*FF-8 strain (FF-8GY) on carbon tetrachloride- and alcohol-induced hepatotoxicity. The primary objective of this study was to investigate the comparative effects of FF-8GY and commercially available glutathione-enriched yeast extract (GYE) against the oxidative stress in alcohol-induced fatty liver of rats. The lipid peroxidative index (thiobarbituric acid-reactive substances, TBARS) and antioxidant status (reduced glutathione level) were used to monitor those protective roles of FF-8GY or GYE treatment. When the rat was treated alcohol, the TBARS levels in the whole liver and the subfractions of microsomal and mitochondria were significantly increased but these were significantly decreased by FF-8GY treatment and tended to be lowered by GYE treatment. The concentration of hepatic glutathione is known to be closely associated with antioxidant system and this was slightly deplete in the alcohol-induced rats, but this was recovered by treating with FF-8GY. However, the glutathione concentration was more significantly decreased in the GYE supplementation in alcohol feeding rats. Alcohol treatment also negatively affected the serum total protein and albumin, but these were significantly increased near normal levels in FF-8GY coadministered rats. These results suggest that glutathione-enriched *Saccharomyces cerevisiae* FF-8 strain may have positively mediate the alcohol-induced oxidative stress, and this effect was more pronounced in FF-8GY compared to GYE.

Key words: Glutathione, yeast, alcohol, oxidative stress

P10

Screen of Lectin in Soybean Cultivars Developed for Chungkukjang and Biochemical Charaterization of Isolated Lectin

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Lectins agglutinate cell and precipitate complex carbohydrates in many plants. The lectin of soybean seeds using for Chungkukjang. was isolated by affinity chromatography on Sephadex G-100, and some of its biochemical characterizations were studied. Hemagglutination activity of lectin was detected in soybean seed, but not in fermented soybean and freeze dried soybean after fermentation. The lectin isolated from soybean seed yielded two band on SDS-PAGE that corresponded to a molecular weight of 30 and 20 kD. This lectin agglutinated rabbit erythrocyte digested with trypsin and was unable to agglutinate human ABO and rat erythrocytes. The optimal temperature for the activity of this lectin was 50°C, and this lectin was quite stable to heat at 20-40°C. The maximal activity was observed at pH 6.2.

Key words: Characterization, chungkukjang, lectin, soybean cultivars