

## **Brewers' rice attenuated aberrant crypt foci developing in colon of azoxymethane-treated rats**

### **ABSTRACT**

Brewers' rice is one of abundant agricultural waste products in the rice industry. The present study is designed to investigate the potential of brewers' rice to inhibit the development of aberrant crypt foci (ACF) in colon of azoxymethane (AOM)-treated rats. The effects on the attenuation of hepatic toxicity and kidney function enzymes were also evaluated. Male Sprague-Dawley rats were randomly divided into five groups: (G1) normal; (G2) AOM alone; and (G3), (G4), and (G5), which were AOM fed with 10%, 20%, and 40% (w/w) of brewers' rice, respectively. The rats in group 2-5 were injected intraperitoneally with AOM (15 mg/kg body weight) once weekly for two weeks. After 8 weeks of treatment, the total number of ACF/colon and the number of ACF in the distal and middle colon were significantly reduced in all treatment groups compared to G2 ( $p < 0.05$ ). Brewers' rice decreased the number of ACF with dysplastic morphology in a dose-dependent manner. Alkaline phosphatase (ALP) level in G5 was significantly lower compared to the G2 ( $p < 0.05$ ). In conclusion, this study found the potential value of brewers' rice in reducing the risk of cancer susceptibility in colon.