

## Effects of low dose of alcohol on DMH-induced colon carcinogenesis in rats

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Accumulating epidemiological evidence suggests beneficial effect of low dose of alcohol on the development of diseases including cardiovascular disease, diabetes, liver cirrhosis, colon cancer, etc. However, there are very limited animal studies on the effect of low dose of alcohol. Recently, we have reported that low dose of ethanol improves liver function in rats fed a high-fat diet. Furthermore, our studies with senescence-accelerated prone-mice 1 and 2 (SAMP1 and SAMP8) have suggested that low dose of ethanol retards the aging. This study was aimed to investigate effects of low dose of alcohol on DMH-induced rats' colon cancer. Male F344 rats (5 weeks old) were fed a commercial stock diet for 28 weeks. Ethanol was given with drinking water containing 0.5%, 1% and 2% (v/v) ethanol. Rats were injected 1, 2-dimethylhydrazine (DMH) once a week for consecutive 8 weeks from 5 weeks of age. The body weight, organ weight and food intake were unaffected by intake of ethanol. Number of adenoma with the colon was lower in the 1% ethanol group compared with the control group and the 2% ethanol group. In addition, intake of 1% ethanol increased colon mRNA of aldehyde dehydrogenase-1 compared to the control group. Our study provides evidence effect of low dose of alcohol on in DMH-induced rats' colon cancer. Also, aldehyde dehydrogenase-1 may relate to colorectal cancer prevention.

### Biography

Kan Takahara belongs to Laboratory of Molecular Nutrition at University of Hiroshima. He attended to 15th International Nutrition & Diagnostics Conference (INDC 2015) in Prague and The 6th International Conference on Food Factors (ICoFF 2015) in Seoul. His experience includes various programs, contributions and participation in different events for diverse fields of study. His research interests reflect in his wide range of publications in various national and international journals.

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