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Dark purple glutinous rice *Var. Luem Pua* tea prevents DSS-induced colitis in mice

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Inflammatory Bowel Disease (IBD) is characterized by chronic and relapsing inflammation of the gastrointestinal tract which is associated with increased risk of developing colitis-associated cancer. Although many chemical-induced colitis models were developed, dextran sulfate sodium (DSS)-induced colitis model was widely used to assess the therapeutic potential of treatments for IBD. In this study, the effects of aqueous extract of dark purple glutinous rice var. Luem Pua (LP) tea on DSS-induced colitis were evaluated. Aqueous extract of LP tea was prepared and dose used was expressed as dried weight of LP tea. Female ICR mice were forced fed with distilled water or LP extract 2 or 5 g/kg/day for seven consecutive days. On each day, 2 hours after feeding, water containing 2% DSS was supplied to all groups except the control group. DSS-induced colitis was scored with disease activity index (DAI) and the colon length, represented the severity of inflammatory lesions in colon, and spleen weight, represented inflammation stage, were evaluated. The results showed that LP extract antagonized the reduction of the colon length, the increase in DAI and the increase in spleen weight caused by DSS indicated the reduction of the inflammation by LP extract treatment. Recently, we have shown that LP contains quite high level of cyanidin-3-glucoside (C3G) with a high antioxidant activity. C3G is one of the active anthocyanin suggested to have benefit in IBD. Our data suggest that drinking LP tea might have the beneficial effects in preventing and treating colitis and IBD.

Biography

J Sattayasai has completed her PhD from Monash University. She is now an Associate Professor of Pharmacology.

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