The effect of anthocyanin-rich blackcurrant extracts on behavioral abnormalities in SAMP8 mice

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Anthocyanins possess high antioxidant activity and are the major group of polyphenols in blackcurrant, a regional specialty in Aomori prefecture. In this study, we investigated the effect of black currant extracts on cognitive and emotional abnormalities in the senescence-accelerated mouse prone 8 (SAMP8). Four month-old SAMP8 mice were fed a basal diet supplemented with 3% blackcurrant extracts for 2 months, and then behavioral experiments were conducted. In the novel object recognition test, treatment with blackcurrant extracts improved the memory impairment in SAMP8 mice. In addition, reduced anxiety-like behavior in SAMP8 mice was reversed by the extracts in the elevated plus maze test. These results suggest that supplementation of blackcurrant extracts has the potential to improve cognitive and emotional abnormalities in aging as well as age-related neurodegenerative diseases such as Alzheimer's disease.