

Studies on Blackcurrants and Metabolic Syndrome

Title: Blackcurrant anthocyanin as a Functional Food Factor –Possibility of Preventing Metabolic Syndrome-

Author: Takanori Tsuda

Test: This test focused on dietary anthocyanins and their prevention of obesity in mice; regulation of adipocytokine expression by anthocyanin; anthocyanin ameliorates hyperglycemia and increases insulin sensitivity in diabetic mice. The anthocyanins used in this study were in the form of blackcurrant anthocyanin extracts (BCA).

Results: BCA was able to decrease body weight over a 12 week period, along with decreasing the food intake during the 10 and 12 weeks. During a 3 week study, the BCA group also had a lower serum glucose level than the control group. BCA also increases insulin sensitivity in diabetic mice.

Conclusion: Anthocyanins have anti-obesity effects and anthocyanins modulate the gene expression of adipocytokines. C3G (one of the potent anthocyanins found in blackcurrant) has anti-diabetic effects due to modulation of Glut4 and RBP4 expression. These findings provide a biochemical basis for the use of blackcurrant, which can also have important implications for preventing metabolic syndrome.