Dietary Supplementation with Canary Seed Powder to Prevent Development of Diabetes in Mice

Vejar, Crystal

Canary Seed (Phalaris canariensis) is commonly consumed in Hispanic cultures as a homeopathic remedy for diabetes. Previously, a single study showed that oral consumption of a canary seed extract reduced weight gain and improved insulin sensitivity in rats with pre-existing diabetes. In this study, a mouse model of diet-induced obesity was employed to assess the health benefits of glabrous canary seed powder. The objective of this experiment was to determine whether the addition of canary seed powder to the diet would prevent excess weight gain and glucose intolerance in mice consuming a high fat diet. Male mice (10 mice per diet group) were fed one of three experimental diets for 12 weeks: AIN93G (a basal diet optimized for health), a 60% fat diet-induced obesity (DIO) diet (known to cause obesity and insulin insensitivity), and the DIO diet supplemented with 1% canary seed powder (DIO+CS). Food consumption and body weight were monitored throughout the study, and body composition was assessed by MRI every 4 weeks. At week 12, impacts of diet on fasting glucose levels and glucose tolerance (a measure of insulin sensitivity) were also determined. For all outcomes measured, there were no significant differences between mice fed the standard DIO diet and those provided DIO+CS. In conclusion, evidence from this pre-clinical study shows that supplementation with 1% canary seed powder was ineffective at preventing excess weight gain and insulin insensitivity in mice fed a high fat diet.

Awards Won: