35. The effect of purple tea extract activity on selected metabolic syndrome parameters in mice

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Abstract

Metabolic syndrome (MetS) is a cluster of metabolic abnormalities. Prevalence of MetS is documented at 50% and 87.5% in Africa and Kenya respectively. It is managed by combining lifestyle modification and pharmacotherapy. Although *Camellia sinensis* TRFK306 has been proven to induce weight loss in mice and humans, its effect on metabolic syndrome is yet to be investigated. This study aimed to investigate the effect of *Camellia sinensis* TRFK306 extract on MetS induced Sprague Dawley male rats. A total of thirty-five, six-weeks-old rats were acclimatized for one (1) week and randomized into 5 groups (n=7). Metabolic syndrome was induced using high- fat fructose diet for eight (8) weeks. Post-hoc statistical analysis using Tukey's multiple comparison test was used to analyze the effect of freeze-dried extracts of *Camellia Sinensis TRFK306* on various markers of metabolic syndrome. Random blood sugar levels revealed significant differences ($p = <0.0001$), for experimental animals. Oral glucose tolerance results were significant ($p = <0.0001$). Total serum triglyceride levels was significant ($p = <0.0001$). Mean serum HDL-C levels revealed significant differences between the normal control and negative control ($p = 0.0009$), the negative control and low dose test ($p = 0.0023$), the negative control and high dose test ($p = 0.0025$) and the negative control and positive control ($p = 0.0014$). The mean serum LDL-C levels revealed significant difference ($p= <0.0001$). *Camellia Sinensis TRFK306* possessed significant beneficial effects on various markers of metabolic syndrome.

Keywords: *Camellia Sinensis, TRFK306, Metabolic syndrome, blood sugar levels, Total serum triglyceride*