



**HYPOCHOLESTEROLEMIC AND HYPOGLYCEMIC EFFECT OF
Saccharum officinale (SUGAR CANE) PEEL CRUDE EXTRACT
IN ALBINO MICE**

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ABSTRACT

The hypocholesterolemic and hypoglycemic effect of *Saccharum officinale* (sugar cane) peel crude extract in albino mice was determined in the study. Twenty-four (24) mice were utilized in the experiment and divided into five groups: T₀ – negative control; T₁ – positive control for cholesterol and no medication for glucose; T₂ – 25% concentration; T₃ – 50% concentration; and T₄ – 75% concentration of the extract. Groups T₂, T₃ and T₄ were done in duplicates. The mice were subjected to 2 weeks acclimatization. Thereafter, five months of high fat and high sugar diet were given to the mice to induce high blood glucose and high blood cholesterol. Different concentrations of sugar cane peel crude extract were given orally by gavage method. Analysis of blood glucose and blood cholesterol levels were done by tail snipping method and was analyzed by a multifunction blood cholesterol and blood glucose electronic meter kit (Kernel MultiCheck). For groups T₀ and T₁, significant increase in blood glucose level was achieved. In T₀ and T₄, there was an increase in blood cholesterol levels, and T₀ have shown statistically significant increase. T₁ was the positive control group having Statins which lowered blood cholesterol levels but caused an increase in blood glucose levels. For blood cholesterol levels, T₀ has increased significantly. T₄ has also increased blood cholesterol levels. In treatment with 25% and 50% concentration of the extract, the same trend can be observed for blood glucose and blood cholesterol levels. T₂ and T₃ did not have statistical significance in lowering blood glucose and cholesterol, but proven effective during the post hoc test – Tukey. The study had proven that sugar cane peel crude extract was able to lower blood cholesterol at 25% and 50% concentrations.